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NOVEMBER 1951

FIREMEN

FIFTY-SIXTH YEAR . NATIONAL FIRE PROTECTION ASSOCIATION

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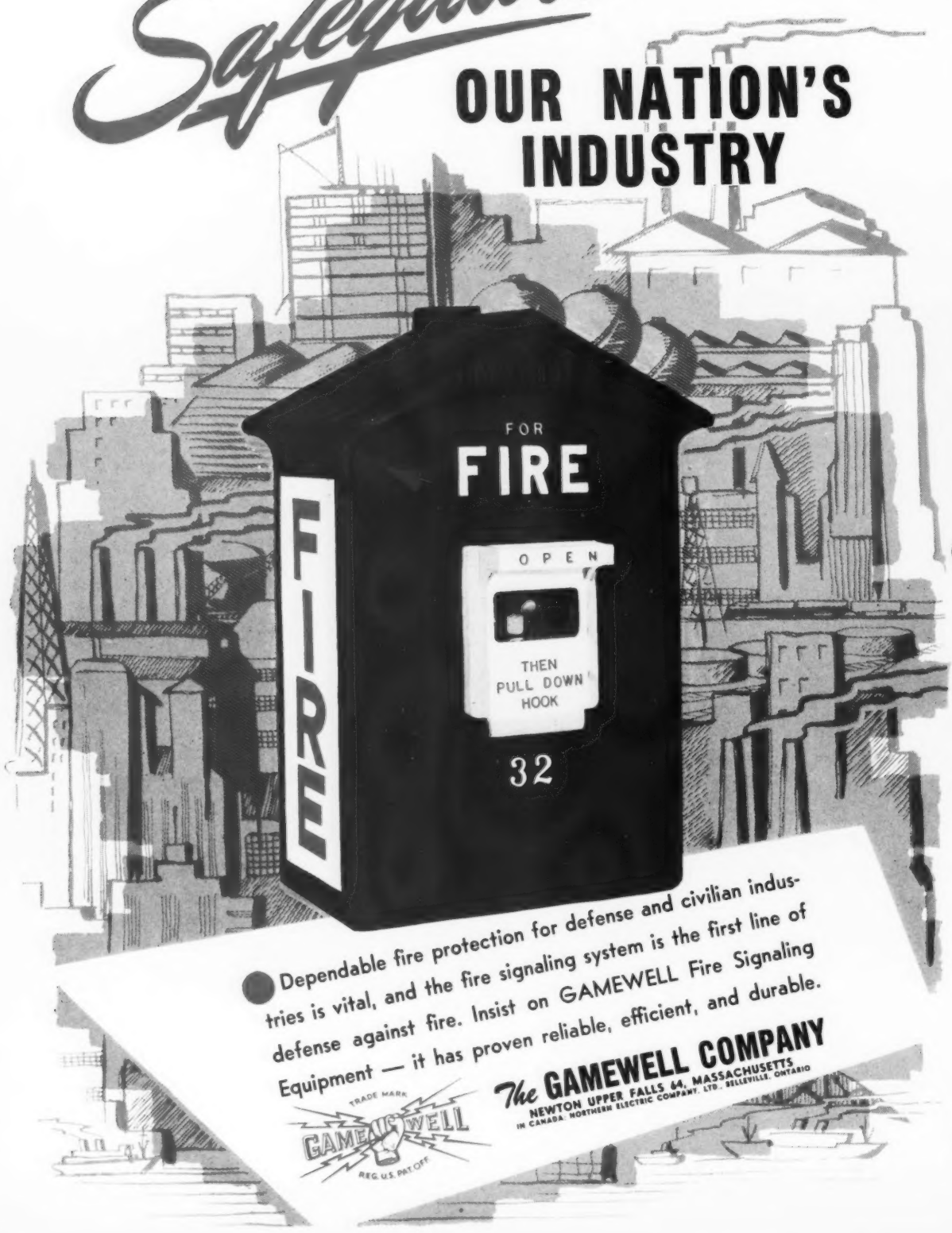
VOLUNTEER

Safeguard OUR NATION'S INDUSTRY



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Firemen

Volume 18 — Number 11

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Cover Picture

The cover picture this month shows one of the scenes that greeted residents of Brighton, New York, on the afternoon of September 21. Additional information may be found on page 15 of this issue of FIREMEN and a more complete report appears in the October, 1951, NFPA *Quarterly*.

Death and destruction struck suddenly in this quiet suburb of Rochester as 11 houses exploded and 28 became involved in fire. Many courageous acts were performed by residents and fire fighters to minimize losses of life and property. There was no mass hysteria as house and schools were evacuated when the explosions began and police, civil defense, and fire department mutual aid systems worked efficiently in the severe test of the emergency.

(*Photo from Gannett News Helicopter*)

Cooperation Needed

It would appear to be in the interest and within the objective of every member of the fire service to secure adequate water supplies for schools and other important properties in the area that each fire department protects. Often an important factor in securing such improvements in fire protection are recommendations of fire insurance organizations based upon surveys and tests conducted by their fire protection engineers. Unfortunately, however, some fire departments, and some water departments, occasionally attempt to gain favor with local property owners or officials by opposing or countering suggestions or recommendations made by fire insurance engineers. A recent case in point involved tests of available water supply at a private school. Fire insurance engineers made a standard flow test from a hydrant and were disturbed to find that at a residual pressure of 10 lbs. a flow of only 593 gallons could be obtained. They advised the school authorities that it would be advisable to provide a more ample water supply to protect lives and property at the school.

The recommendations of the insurance authorities came to the attention of the local fire department which declared itself satisfied that the existing water supply at the school was adequate and set out to prove its contention by connecting pumping apparatus and hose lines to see what maximum flow might be obtained. When the residual pressure was reduced to zero by fire department pumping it is understood that some 750 gpm was obtained. By pulling the pumper intake pressure down until a minus reading was obtained some 830 gpm was squeezed from the system. This information is reported to have been used to assure the school authorities that the water supply was ample for fire protection. Actually, it confirms and emphasizes the findings of the insurance engineers that the tests were intended to embarrass. It demonstrated that only water enough for two or three good streams from 2½-in. lines was available. Any qualified observer would have known that a test showing only 593 gpm at 10 lbs. would not have produced a really adequate flow even at suction pressures so low as to be dangerous to water mains and plumbing equipment.

Further, in going on record that the existing water supply is adequate, the fire department in effect is assuming responsibility for any failure to control a possible fire that actually might spread due to insufficient water. Few modern fire departments should expect to control a big school fire with one 750 pumper. A working fire at such location would normally bring a fire department pumping capacity of from 2,000 to 10,000 gpm depending upon the location and the severity of the fire.

A better approach for the fire department would seem to be to back up the underwriters' request for more water and perhaps supplement that with additional suggestions for better exits, detection and alarm equipment, automatic sprinklers and other facilities that would further the fire safety to which both the fire department and the fire insurance engineer should maintain as a common objective. Certainly, when an insurance engineer brings a fire flow problem to the attention of the fire department, the department should see what can be done with the limited water supply available.

State and Provincial Firemen Training — 1951

TRAINING of firemen under statewide or provincial programs continues to increase. During the past fiscal year reports indicate that at least 19,793 more firemen received such training than in the preceding year. Figures shown in the accompanying report include only those receiving fire department training conducted directly as part of state training programs. Local instructors and county-wide fire schools not reporting to a state agency trained thousands more firemen.

Instructor-training programs have shown an increase in many states. Many state firemen's associations have organized and sponsored training schools to provide for their fire departments the training that is essential to safe practices in fire fighting.

Civil defense instruction, plans and training gathered impetus during the year, with New York, Connecticut, Massachusetts, and many other states intensifying their programs in this respect.

The NFPA Committee on Firemen Training published the pictorial manual "Handling Hose and Ladders" as a special Civil Defense edition. A subcommittee of the NFPA Committee on Firemen Training compiled a tentative report on "Operating Fire Department Pumpers" which is currently appearing serially in FIREMEN.

The Fire Department Instructors Conference held its 23rd meeting in Memphis in January and had an attendance of 950, the largest in the history of the conference.

ANNUAL STATEWIDE FIRE SCHOOLS, 1951

State	Firemen Attend.	No. Years Held
Alabama	210	15
Colorado	408	18
Connecticut	176	10
Delaware	48	3
Florida	561	22
Georgia	268	—
Idaho	157	—
Illinois	606	27
Indiana	302	17
Iowa	436	27
Kansas	277	20
Kentucky	468	14
Louisiana	105	20
Maryland	227	18
Michigan	370	23
Minnesota	503	23
Missouri	176	15
Montana	—	12
Nebraska	701	12
New Mexico	224	20
North Carolina	363	23
North Dakota	—	8
Ohio	64	6
Oklahoma	167	18
Pennsylvania	769	13
South Dakota	437	22
Tennessee	78	8
Texas	677	22
Utah	—	7
Virginia	96	5
Washington	225	—
West Virginia	180	21
1951 Total	9,279	
1950 Total	8,993	

TOTAL FIREMEN RECEIVING TRAINING
(State and Provincial Programs Only)
Year Ending June 30, 1951

State		State	
Alabama	1,844	New Jersey	438
Arkansas	3,842	New Mexico	224
California	5,718	New York	22,371
Colorado	3,784	North Carolina	363
Connecticut	1,275	Ohio	1,998
Delaware	830	Oklahoma	1,724
Florida	4,969	Oregon	4,900
Georgia	3,873	Pennsylvania	6,505
Illinois	606*	South Dakota	916
Indiana	4,920	Tennessee	482
Iowa	3,728	Texas	677*
Kansas	1,086	Utah	120
Kentucky	1,446	Vermont	600
Louisiana	149	Virginia	456
Maine	600	Washington	9,626
Maryland	1,552	West Virginia	674
Massachusetts	777	Wisconsin	265
Michigan	3,164		
Minnesota	1,040	Total U.S.	105,160
Mississippi	1,186	Ontario	777
Missouri	662	Br. Columbia	3,500
Nebraska	5,407		
Nevada	363	Grand Total	109,437

* Complete total of training not available.

Alabama. Ben E. Harris, Associate State Supervisor of Trade and Industrial Education of the University of Alabama reports that 1,542 men were instructed in 35 centers in the state by Chief R. H. (Henry) Ryan, State Instructor in Firemanship. In addition sixteen centers conducted classes with local instructors. An officer training school was conducted at Birmingham for one week with a total attendance of 92. The Annual Fire School, held in May, had an attendance of 210. The Alabama State Fire Chiefs Association was organized at the school this year and should result in added interest in the state-wide training program.

Arkansas. J. C. Ruppert, State Supervisor, Trade and Industrial Education, Department of Education, reports that 3,733 firemen enrolled for training during the past year. The training program is based upon courses and textbooks published by Oklahoma A & M College. While no state central firemen's school is conducted, conferences are held each year for local fire department instructors for instruction in techniques of training, job demonstrations, and conference leading. Last year 109 instructors attended the conference. State Fire Instructor John E. Hurley has been instructing at regional schools at Stephens and West Memphis where instruction is given with emphasis on oil and butane fires.

California. Thomas S. Ward (Member NFPA Committee on Firemen's Training), Supervisor of Fire Training of the Commission for Vocational Education, reports that 5,718 men received training in 285 classes with a total period of 4,222 hours of instruction. This included 64 zone classes held during the year for 1,461 men from 194 departments and 221 departmental classes, with 4,257 men receiving 2,997 class hours of instruction. The instructional staff of the fire training program consists of a special supervisor of fire training and 8 traveling instructors of fire training. These instructors received a 4 weeks' intensive training course at the training tower of the Burbank Fire Department. They were then assigned to 8 districts throughout the state and instructed members of fire departments in 58 counties. Members of the fire training staff also participated in 16 conferences including the meeting of the NFPA Committee on Firemen's Training. The special supervisor of fire training served as a consultant to the advisory committees of Napa Junior College and Contra Costa County Junior College.

Manuals on "Salvage Operations" and "Motor Vehicle and Pump Care and Operation" were reprinted to meet the great demand for reference material. A training manual for auxiliary firemen was also compiled. The second annual Technical Institutes of Fire Training, organized by the Fire Training Advisory Committee, were held during the months of March through June of 1951. In the Basic Institute a total of 342 officers and men representing 90 fire departments recently received instruction through the institute training. In the Advanced Institute, 338 officers and men, representing 69 fire departments, received training. Total attendance for the institution was 692.

Colorado. C. O. Bonnelle, Firemanship Instructor for the State Board for Vocational Education reports that 3,784 men from 65 fire departments or towns were given a total of 827 hours of instruction. There were also 7 area schools conducted with an enrollment of 408. Also, 671 men attended the 17th Annual Fire School conducted by the State Firemen's Association.

Connecticut. Laurence W. Eddy (Member NFPA Committee on Firemen's Training, Supervisor of Service Training, State Department of Education, reports that the impact of Civil Defense was reflected in increased activity in firemen training in this state. A total of 1275 fire fighters received training during the past year. The 10th Annual Connecticut Fire College at New Haven had an attendance of 176 men from towns in Connecticut and three neighboring states. In regional schools throughout the state 572 firemen received certificates in the 32 courses conducted. Three 24-hour courses in Teacher Training and Leadership were given for 68 officers of the New Haven Fire Department. A one-week course in Fire Aspects of Atomic Warfare was given at the University of Connecticut to 27 selected offi-

cers. Another course, sponsored by the State Police Department was attended by 12 fire officers. A course to train instructors for auxiliary firemen conducted for 7 hours on three successive Sundays to include organization for civil defense, demonstrations, practice and teaching principles and methods. Of the 246 registered for this course, 205 received certificates for attendance at all sessions. Organized training programs were conducted in several towns throughout the state with instruction under the direction of local drillmasters.

Delaware. Frank M. Forstburg, Conference Leader Trainer in Trades and Industries of the Department of Public Instruction reports that during the past year 830 volunteer firemen participated in training at 33 centers which represented 36 fire companies. This includes 48 firemen who attended the Second Annual Short Fire Course, held in August, 1950. The Third Annual Fire College, held in August, 1951, had 77 men in training.

Florida. Attendance at the Florida State Fire College sessions under the direction of Superintendent W. H. Barnett showed an increase of more than 250 per cent above that reported last year. Altogether 4,969 men were enrolled for training and spent 34,364 hours in classes. Fire fighters represented 105 towns, with 52 of the towns receiving itinerant training and 53 towns represented at the Fire College by 561 men. The Florida Fire College program has systematic unit training with basic, advanced, and special training courses divided into 30-hour units. Weekly sessions started May 7, 1951, and continued through September 14, with three units of training offered each week. During previous years only one to three weeks of training were offered.

Georgia. J. F. Cannon, Supervisor of the Public Service Occupations Training of the Industrial Education Department, reports that two additional training areas have been established in this state during the past year. At present 15 area coordinator-instructors serve 135 of the 159 counties in the state. The annual fire prevention school in Atlanta was attended by 268 fire fighters and building custodians. In addition evening schools were conducted once or twice a month throughout the state with instruction given by coordinators of the respective areas with assistance from local firemen who had received leadership-instruction training. Local programs covered 31 cities and towns and were attended by 671 firemen. There were 15 area programs attended by 2,535 firemen, 3 zone schools, conducted on a 3-day basis, with 43 fire departments represented by 326 men, and 4 leadership-instructor training courses attended by 73 men.

At the 1951 Connecticut Fire College in New Haven Battalion Chief Andrew J. Flanagan (left) exhibits proof of his labors to (left to right) Captain Joseph Kirby, State Fire Coordinator; Deputy Chief Thomas J. Collins of New Haven; Mr. Laurence W. Eddy, Supervisor of Service Training, State Department of Education; Deputy Chief James P. McSweegan of Hartford; and Chief Bill Johnson, West Haven Fire Department.

Idaho. Chief Steve Taylor of the Boise City Fire Department reports that the Idaho State Fire School was held in Boise this year and had an attendance of 157. It was voted to hold the school in Boise again in 1952. In January and March, 1951, 2 schools for Instructor Training were conducted by Boise Junior College and the State Board of Vocational Education under the direction of the Boise Fire Department. Combined enrollment of the two schools totaled 19 with 16 men completing the courses.

Illinois. Attendance at the Illinois Fire College climbed to 606 this year, according to Director George W. Harper. This included 114 fire chiefs, 44 assistant chiefs, 72 other officers, and 235 firemen. Also attending were 25 fire district and city officials, 29 representatives of the industrial fire service, 25 fire inspectors, 25 fire marshals, 29 exhibitors' and manufacturers' representatives and 8 others. In addition, several thousand firemen received instruction at regional schools conducted by the State Division of Fire Prevention.

Indiana. Francis Hartman, Associate Director, Indiana Fire Service Training School, Public Safety Institute, reports that there were 141 training schools in Indiana last year with a total of 4,920 firemen receiving training. The 18th Annual State Fire School had an attendance of 302 for the 14-hour course. A total of 281 representatives from 42 states, Canada, Panama, Hawaii, and Alaska attended the Seventh Annual Arson Investigator's Seminar at Purdue University. Specialized schools in the state had 265 firemen attending, while instructor training at the Indianapolis Fire Department Drill School was given to 128. Regional, or district schools were arranged by firemen's associations and training was given to 2,163 firemen. At the requests of chiefs 109 departmental schools were given to 67 fire departments including a total of 1,781 firemen.

Iowa. Mark Brosier of the Engineering Extension Service of Iowa State College reports that 436 firemen attended the 27th Annual Fire School in May. A total of 3,728 firemen attended schools throughout the state. The 27th Annual Fire School had 440 firemen registered, representing 130 cities and 6 states. The 4th Annual School for Fire Department Inspectors had 24 men completing the 30-hour course of instruction. A 30-hour course for Fire Department drillmasters was held at Des Moines. A program of training in industrial fire safety was given to 118 men in 3 industrial schools. Future plans include recommendations for an additional field instructor to bring the Fireman-Training staff to a total of 5 persons and a request for permanent facilities for accommodating fireman-training activities.

Kansas. The firemanship training program of Kansas during the past year was attended by 650 volunteer firemen from 50 Kansas communities, according to a report from Keith Royer, Chief Instructor of Firemanship Training at the University of Kansas. In addition there were 4 thirty-hour Fire Department Officer Training courses. These short courses are given on a regional basis to serve the paid departments. Attendance numbered 159 officers from 25 departments. The 21st Annual Kansas Fire School was attended by 277 firemen from 80 Kansas towns, an

Ladder evolutions at Iowa State College.

Rescue practices, Fire School, Hutchinson, Kansas.

increase of about 10 per cent in the number of towns represented. In addition to these organized classes the two instructors in the field gave instruction to many civic clubs and spontaneous gatherings.

Kentucky. Captain V. A. Beam, Coordinator of Firemen's Training in the Department of Education, Kentucky, reports that a total of 1,446 firemen received training during the past year. This included 741 men who attended 40 local schools, 237 men who attended the two regional schools at Worthington and Hopkinsville during the past May and June, and 468 men who attended the Annual State School at the University of Kentucky in June.

Louisiana Chief Robert A. Bogan of the Baton Rouge Fire Department (Member NFPA Committee on Firemen's Training) reports that the Annual State Fire School held in Baton Rouge during the past June had an attendance of 105 fire fighters representing 55 cities and 3 industrial plants. Three sectional schools were also conducted. At Ruston, 20 men representing 4 cities received training through a 4-day program. Similar training was received by 9 men at the sectional school in Columbia and by 15 men at the school held in Clinton.

Madison, Kansas, Fire Department's pump operators' class.

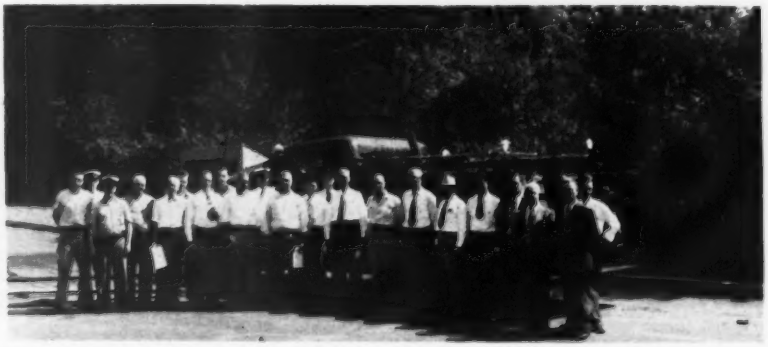
Combined operations of the hose and ladder groups at the Short Course at University of Maryland at College Park.

Maine. Maurice C. Varney, Director Trade and Industrial Education, Department of Education, reports that between 600 and 700 men received training through the combined 8- and 10-hour state fire training program.

Maryland. Robert C. Byrus, recently appointed Director of Fire Service Extension at the University of Maryland, reports that the 18th Annual Short Course for Maryland firemen had a total enrollment of 227 students. During the past year there were 53 classes of instruction organized throughout the state with a total enrollment of 1,052 firemen representing 101 fire companies from 19 counties. The Basic Course had 525 firemen who received certificates while 149 completed the Advance Course and an additional 74 firemen completed a specialized training course. In addition, 42 awards were given to an industrial fire brigade of the Crown Cork and Seal Company in Baltimore.

Massachusetts. The Massachusetts State Department of Education reports that 25 training classes were held during 1950–51. A total of 777 fire department members received instruction from these organized training classes, most of which were of 20 hours duration. The monthly meetings of 80 fire department instructors were continued. The State Director of Civil Defense has called upon state and local Vocational Education staffs for organizational and instructional assistance in the Civil Defense Program.

Fire fighters at the Maryland school operate a charged line from the drill tower.



The Massachusetts Fire Department Instructors Association monthly meeting at Brookline, Massachusetts, Fire School, September 12, 1951, with Brookline Fire Department detail assisting in developing training techniques for pumper operations.

Michigan. Organized firemen educational programs of 30 to 40 hours instruction were conducted in 19 Michigan communities with 407 firemen enrolled, according to a report from M. D. Whale, Supervisor, Department of Public Instruction in the State of Michigan. Chief Wallace Gannon and Captain Clifford Warner, itinerant firemen instructors for the Extension Service of the University of Michigan operated intensive training activities in 66 Michigan communities, with an enrollment of 1,433. The annual Michigan Fire College was conducted for four days at the University of Michigan in Ann Arbor with an attendance of 370. A regional fire school, conducted in Iron Mountain, had an attendance of 83. The Fire Inspectors' Institute conducted at Michigan State College in conjunction with the Fire Bureau of the Michigan State Police had 86 fire inspectors participating in a 40-hour educational program. In-service firemen educational activities were conducted in 13 municipal fire departments for an average of 100 hours with 1,086 participating. There were 4 vocational firemen teacher-training conferences with 68 instructors participating in a 20-hour instructor training program. The services of a representative advisory committee were utilized to assist in the development, organization, and operation of the educational programs.

Minnesota. Deputy Commissioner Leonard C. Lund of the State Fire Marshal Division reports that 1,040 men representing 224 fire departments attended 5 regional training schools during the past year. The firemen's training program in this state is carried on through 13 regional associations, with some of the schools still to be conducted. Attendance at each of these schools averages about 150 firemen, with the larger schools having as many as 200 or 300 in attendance. Training is under the direction of fire engineers and instructors of the large city departments. The State Fire Marshal Department assists these associations in preparing these schools and deputy fire marshals work with fire chiefs in the respective regions, with the deputies' districts, attend the schools, and participate in the programs. The Northwest Fire School, sponsored by the State Fire Marshal Department, had an attendance this year of 503.

Mississippi. E. A. Parker, State Supervisor, Trade and Industrial Education, Jackson, Mississippi, reports that 1,186 firemen from 34 fire departments received organized training in that state during the past year. In addition fire prevention lectures were given to 4,390 individuals. Members from some of the larger departments within the state are being selected to be trained as instructors for a fire college organization planned for the future. Headquarters for this school will be at one of the state's educational institutions.

Here are some Michigan fire fighters receiving training in the extinguishment of an oil pit fire.

Missouri. Chief W. Bush Walden, Fire Instructor at the University of Missouri, reports that fire service activities have been placed with the Engineering Extension Service which is jointly sponsored by the College of Engineering and Adult Education and Extension Service and headed by Professor R. T. Quick. The 15th Annual State Fire Conference was held in June and had a registration of 176 firemen from 26 counties. There were 3 regional conferences with a total enrollment of 317 firemen from 64 departments. Extension class programs in firemanship were conducted in 13 departmental schools with 156 firemen receiving an average of 16 hours of instruction each. In answer to requests for specific phases of instruction 10 special schools were held during the year. A 30-hour course of instructor-training was also given to 13 men at a school held at Jennings. There were also 4 industrial fire safety schools held at the request of the Missouri Power and Light Company.

Montana. F. J. Sullivan, Assistant Manager, Montana Fire Rating Bureau in Butte, reports that the 12th Annual Fire School was conducted at Polson and sponsored by the Polson Volunteer Fire Department and the State Board of Education. Clayton Brown, Chief of the Polson Fire Department and also Lake County Fire Chief had much to do with the planning and success of the school.

Nebraska. Joseph I. Fetters (Member NFPA Committee on Firemen Training), Assistant State Supervisor, State Board of Vocational Education, reports that 2,890 firemen were enrolled at 30 training centers and given a total of 633 hours of instruction. In addition, 6 regional schools were attended by 708 firemen from 173 fire departments for a total of 48 hours of instruction. A 3-day State Fire School had an attendance of 701 firemen representing 142 fire departments receiving a total of 24 hours of instruction. Fire Department Instructor training was given to more than 100 firemen at 4 classes. Of these, 92 men received certificates. Some of the training time throughout the year was given to the standardization of fire hose threads and in 612½ hours a total of 72,850 feet of 2½-in. hose, 2,035 hydrants, and 1,043 fittings were rethreaded by firemen receiving instruction. Other activities conducted by the training staff included many training classes covering organizing of rural fire protection, specialized fire training classes, fire prevention and protection, testing, standardizing, and other services, fire school and convention programs, and regional and state fire schools. Altogether a total of 1,806 hours of instruction was given to 5,407 firemen, 1,447 non-members of the fire service, and to 4,575 students.

Nevada. F. I. Wallace, Supervisor, Trade and Industrial Education, reports that firemen training was conducted in 20 schools during the fiscal year 1950–51. Total attendance amounted to 363 and total student hours amounted to 3,534.

New Jersey. While there are no State-conducted fire schools in this state, members of the staff of the Vocational Division of the Department of Education cooperate with the State Fire Warden and other representatives of the volunteer firemen's organizations and do a certain amount of lecturing when requested. A fire school conducted through the Vocational Division at the Camden County Vocational School at Merchantville had an enrollment of 40 volunteer fire fighters.

The New Jersey Safety Council sponsors two schools, one in Newark and the other in Merchantville, with one class per week for a duration of 6 weeks. The full sessions cover a period of 3 years. A Fall session held at Fort Dix is attended by firemen from all over the State. The Newark Fire Department and the Fort Dix Fire Department supply instructors to this school. Also available are instructors from the New Jersey Fire School Council. At present 3 schools are in operation in Camden County with a total enrollment of 120. Other schools in operation at the present time have an attendance of 278.

New Mexico. The 20th Annual Fire College was held simultaneously with the 27th Annual Convention of the New Mexico State Firemen's Association. 224 fire fighters representing 34 fire departments in the state helped to make a record attendance. In addition, fire chiefs from 75 towns throughout the state attended the Convention.

New York. Thomas W. Ryan, Director of Safety, reports that during the past year 6 field representatives covered a total of 240,000 miles throughout the State, supervising the conduct of fire training programs, attending civil defense meetings, working out mutual aid plans, and otherwise offering assistance to the Fire Service of the State. A total of 13,639 firemen were trained in three courses. The Basic Course had 5,647 student firemen, the Intermediate Course 4,589, and the Advanced Course 3,403. Considerable emphasis was placed on civil defense in relation to the fire service. Instructors' teams staffed by field representatives of the Bureau of Fire of the Division of Safety held 24 meetings throughout the State with more than 10,000 fire chiefs, deputy fire chiefs, local civil defense directors, and other advisory personnel attending. Civil defense training exercises were held to test county, inter-county, and state mutual aid operations. In some of the mutual aid plans fire apparatus travel distances as great as 120 miles.

The Division of Safety also established a State Civil Defense Rescue Training School with Fire Bureau representatives serving on the faculty. Of the 4 counties of the state that conducted training under the Public Service Training Program, Erie County had 1,008 graduated. In addition, 21 hours of instruction on the subject of atomic warfare were given to an estimated 600 firemen. In Onondaga County 128 men received training with an additional 62 participating in a course still operating. In Suffolk County 1,584 men graduated from a training program, and an additional 4,017 attended a 24-hour course covering the problems of atomic warfare. Suffolk County also conducted a training institute of two nights' duration with an average attendance of about 600. In Nassau County 1,118 men were graduated from a training program with an additional 2,715 still receiving training.

North Carolina. State Fire Marshal Sherwood Brockwell reports that a record attendance of 363 firemen representing 102 North and South Carolina fire departments attended the 1951 Session of the North Carolina Fire College and Drill School, conducted at Charlotte. Training included drill school, pump operators' courses, and fire college lectures. For completion of 4 full terms of the Fire College, 41 students were awarded 1951 diplomas.

Members of the Columbus, Ohio, Fire Department, demonstrate ladder raises for consideration in state plan of instructional materials.

Ohio. George L. Brandon, District Supervisor, Trade and Industrial Education Service of Ohio, reports that 1,998 fire fighters were trained in 73 communities by 21 instructors during the past year. All of this training was given under basic 30-hour courses. There are 3 full-time instructors and 18 certified part-time instructors. Instructor training is conducted on a regional basis through 15-hour courses. Additional instructor training was given by J. A. Roenigk, Trade and Industrial Service Teacher Trainer. There were 64 registrants at the Sixth Short Course in Fire Administration conducted by Dr. Harvey Walker at Ohio State University.

Oklahoma. George Orgain, in charge of the Fire Service Training Division of Engineering and Industrial Extension, reports that 1,724 firemen received a total of 43,636½ man-hours of instruction during the past year. This included 167 firemen enrolled at the 18th Annual Fire Service Training Short Course at Oklahoma A & M College, 984 men trained by itinerant instructors, 551 men trained by local instructors, and 22 men enrolled at the officer and teacher training courses.

Oregon. Elmer H. Halstead, State Supervisor of Public Service Training, reports that during the past year 2,821 men from 91 fire departments participated in regular unit training courses of 2 hours or more per week. Officer training courses were given to 1,010 men from 41 departments, and 79 instructors were certified through 4 instructor schools. A total of 57 fire departments have completed the State Basic Training Course since October of 1948.

Currently 23 departments are enrolled in the officer training course and 68 departments are training men in basic and advanced courses. An additional 20 fire departments are anticipated for the basic course and 4 inspection schools and 2 instructor schools are planned for the near future.

Pennsylvania. Edgar A. Spotz (Member NFPA Committee on Firemen's Training), Adviser, Fire Service Training, Public Service Institute, reports that a total of 6,505 firemen registered for training during the past year. This included 2,407 men instructed at 84 local classes, 769 men who attended the 12th Annual Pennsylvania Fire School conducted at Lewiston, August 1950, and 3,329 men who attended 11 regional and county fire schools. In the latter group 1,256 men were trained at the Alleghany County Fire School conducted by the Fire Chiefs Association of Alleghany County.

South Carolina. While there is no state-conducted training school in this state fire fighters may secure training from the nearby North Carolina School. There is also a training school at the Columbia, S. C., Fire Department, which Chief A. McMarsh reports was conducted as in previous years.

South Dakota. The 22nd Annual Fire School had an attendance of 437 fire fighters representing 71 departments. Three meetings of the South Eastern Firemen's Association had a total of 250 attending from 19 departments. The Black

Two low-pressure fog streams and two high-pressure fog streams being used on the same oil and gasoline fire at Pennsylvania Fire School.

Hills Regional School had a total attendance of 135 fire fighters from 14 departments while 94 fire fighters from 21 departments attended the school at Hudson.

Tennessee Homer S. Elkins, Instructor of Fire Service Training of the State Department of Vocational Education reports that a total of 482 fire fighters received vocational instruction during the past year. This included representatives from 27 different departments and 78 members who had enrolled at the 1950 fire school. The 1951 fire school had a total of 213 persons registered, 131 receiving the required length of training to be awarded certificates. In this program there are eight outlined training programs ranging from basic firemen training to special officer training.

Texas. Colonel H. R. Brayton, Director of Firemen's Training School (Member NFPA Committee on Firemen's Training), reports that the 22nd Annual School conducted at College Station, Texas, topped previous records for attendance in the number of men enrolled and the number of cities represented. A total of 677 men from 349 cities in 18 states participated in this session. There were 102 instructors and administrators participating in the session and 10 visitors, making a total attendance of 789. Military stations represented included 17 from Texas, 31 from other states, and 1 from Puerto Rico. Total registration was 90 above that of last year.

Utah. Assistant Chief D. E. White of the Salt Lake City Fire Department reports that the training program has been under the joint direction of the Utah State Firemen's Association, Educational Committee with Assistant Chief Al Thompson as Chairman, and the Utah State Department of Trade and Industrial Education with Mr. Von Robertson, Director. During the Seventh Annual Fire Training School a 20-hour specialized Instructor Training Course was completed by 18 firemen from fire departments throughout the state. Mr. Edward C. Larson, Industrial Teacher-Trainer, Weber College, Ogden, conducted the course. These men are now serving as instructors in regional schools. Altogether 6 such schools have been completed and a total of 15 are planned before the end of the year. Average attendance is 20 at each session. To further improve planning and attendance of the schools an advisory committee is being organized. It will have representatives from the State Municipal League, the State Forestry and Fire Council Board, 1 Fire Chief, 1 fireman member of the State Association, and 1 member from the State Board of Education. The President of the Utah State Firemen's Association will act as Chairman.

Student firemen at Pennsylvania Fire School "learn by doing" how to extinguish a structural fire. (*Photo by Kepler Studio.*)

Vermont. William Adams, Secretary-Treasurer of the Vermont Volunteer Firemen's Association, reports that training was conducted in 6 schools held throughout the state during the past year. Between six and seven hundred firemen participated in the training programs conducted by Chief Donald Kelley of Burlington and Chief Alfred H. Koltonski of Rutland. These classes were operated through the cooperation of the Vermont Fire Chiefs Club, the State Firemen's Association, and the Vocational Division of the State Department of Education.

Virginia. Harold I. Baumes, Executive Secretary of the League of Municipalities, reports that 456 firemen from 20 towns and cities received itinerant instruction at local fire schools during the past year. A school for fire instructors from all sections of Virginia was held in Norfolk under the direction of Clay A. Easterly, former itinerant fire instructor, and attended by 96 instructors. A two-day institute at Norfolk had an attendance of 61 fire chiefs.

Washington. Emma L. Ethier, Secretary, Washington State Firemen's Association and the Washington State Association of Fire Chiefs, reports that the training programs held under these two associations and directed by J. R. Cook of the State Board of Education had 9,626 men attending a total of 465 drills, meetings, and schools. The Annual Fire School was attended by 225 fire fighters with 81 receiving certificates while 331 received certificates for a 60-hour course. A total of 121 districts and cities was represented.

West Virginia. R. E. Hanna, Jr., Director of Fire Service Extension Schools reports that 180 firemen attended the West Virginia State Fire School in addition to 12 instructors who received training, and representatives from 44 municipal departments and 15 industrial departments. The Firemen's Extension Course, consisting of 58 hours of classroom and field instruction was given to 494 men.

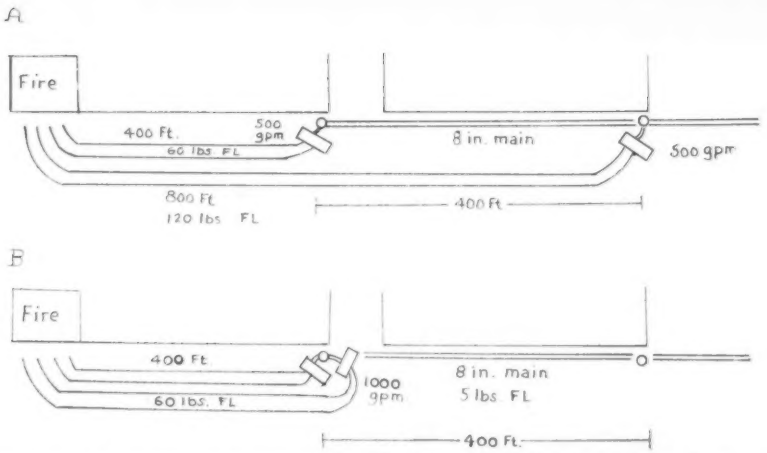
Wisconsin. Firemanship training in this state operated out of 5 training centers, according to a report by R. L. Welch, Supervisor, Trade and Industrial Education, State Board of Vocational and Adult Education. Most of the training was for small city departments and enrollment totalled 265. Currently a program is being planned to give instructor training to officers of volunteer departments. Initially this will include 17 volunteer fire departments with training to expand to other sections of the state to help solve special problems in rural and village fire fighting.

British Columbia. There are 158 fire departments in this Province, mostly volunteer. Fire Marshal W. A. Walker has attached to his staff four men whose specific duty is to travel to all fire departments in the Province to disseminate the information regarding the training of firemen and the organization of fire departments. This Travelling Instructional Unit, operated by the Office of the Fire Marshal, has been in continuous operation since 1947 and instructs classes totalling approximately 3,500 men per year. In addition, there are four associations actively engaged in training of firemen. The British Columbia Fire Association, the Vancouver Island Firemen's Association, the Okanagan Mainline School and the Fraser Valley Firemen's Association develop firemen's training by means of practical instruction, round table discussions, and interchange of representatives. The combined membership is approximately 1,000.

Ontario. D. E. Barrett, Assistant Director of Fire Training, Office of the Fire Marshal, Province of Ontario, reports that Itinerant Training to 325 staff members of 8 Government hospitals throughout the Province and that 235 visits were made to municipal fire departments by members of the staff. There were 2 Fire Inspection Practices courses held with a total attendance of 39 fire inspectors. These courses were of 5-day duration and the NFPA Inspection Manual was used as the basic textbook. The Fire Marshal's Office has obtained one fully equipped pumper, three panel trucks, and one suburban type vehicle for bringing training facilities to various municipalities. A total of 6 regional schools was conducted this year through this training with 137 full-time and volunteer firemen receiving certificates for completing this course. Each fall a conference for the Fire Chiefs of the Province is held under the auspices of the University of Toronto and the Ontario Fire Marshal's Office. Attendance varies from 150 to 175. Key fire department personnel also participated in 3 Radiation Monitoring Courses. The courses were of one week's duration and were attended by 66 members of fire departments in the larger municipalities.

MAKING A GOOD JOB OF IT

BY WARREN Y. KIMBALL



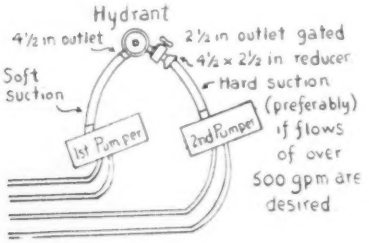
By taking full advantage of hydrant output friction loss can be minimized. As shown above, two pumpers connecting to a good hydrant nearest to the fire (as in B) offer greater efficiency than two pumpers connecting to separate hydrants (as in A) which sometimes necessitates long lines and large friction loss.

Two Pumpers at a Hydrant

WITH the exception of the high value districts of large cities where 3- and 3½-in. hose is used to supply heavy streams, most fire departments have little or no hose larger than 2½-in. diameter. Except with very short lines, this limits the flow in each hose line to about 250 gallons per minute because at higher flows the friction loss in the hose is excessive.

This means that to fully utilize output of a 750-gpm or 1000-gpm pumper, three or four lines of hose may be needed. Few pumpers carry enough hose to fully utilize their full capacity except at comparatively short distances.

Yet, in the case of large fires it is desirable and often necessary to concentrate large flows. This may require substantially the full capacities of available pumpers. There is usually little difficulty with first alarm pumpers which can take advantage of the hydrants close to the fire. However, pumpers arriving on multiple alarms or mutual aid calls often are so far from the fire that much of their power is used to overcome friction loss rather than in delivering large quantities of water.



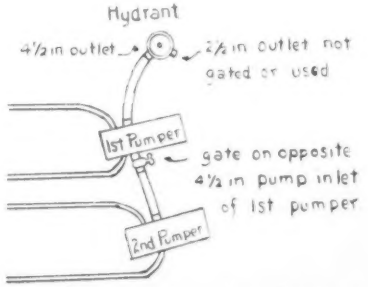
The second pumper may be connected to a gated 2½-in. outlet of a hydrant already supplying another pumper through the 4-in. or 4½-in. hydrant outlet. It may be desirable to have the second pumper use a hard suction if supplying more than two lines in conjunction with another pumper using the large hydrant outlet and also supplying several lines.

While 153 lbs. pressure is lost in delivering 250 gpm through 1000 ft. of 2½-in. hose and 212 lbs. pressure is lost delivering 300 gallons through the same size of hose, under most streets the city or water utility has provided mains which can carry considerably greater quantities of water at comparatively small pressure losses. A 6-in. main of average age or condition will carry 750 gallons per minute 1000 ft. with only 30 lbs. pressure loss. An 8-in. main will carry the same flow with only 13 lbs. pressure loss. As most hydrants are supplied on looped mains with water coming from more than one direction, the pressure losses in most instances are much less.

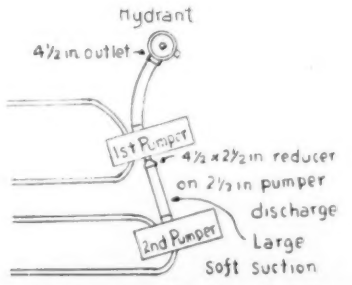
Accordingly, when the fire department wants to obtain large flows, it should seek to take advantage of the carrying capacity of the larger mains under the street and avoid unnecessarily long lines of smaller 2½-in. hose. This can be done by making maximum use of the hydrants nearest to the fire. It is poor practice, generally, to have several pumpers working at different hydrants each supplying but a single line, unless the nearest hydrants are incapable of supplying the required flow.

But let us assume that 1400 gallons is available from a hydrant near the fire and there is already a 500-gpm or 750-gpm pumper connected to that hydrant supplying several lines. Two more lines are needed from another pumper and the next nearest hydrant is 400 or 500 ft.

(Please turn to page 20)



The second pumper can take suction by connecting to the 4½-in. suction connection on the opposite side of the first machine away from the hydrant. This method has been used in Minneapolis where the large suction inlets are gated for this purpose. Where they are not gated the hydrant would have to be shut off to connect the second pumper. However, from a good hydrant a single large suction hose can supply two pumpers.



The third method, while the easiest to use, may be the least efficient. Connect a short soft suction from the second pumper to an outlet of the first pumper. The second pumper is then relaying water from the first pumper and serves as an additional pressure stage in the pumping operation. However, the volume available depends upon the ability of the first pump to supply its own lines and spare enough water for the second pumper. A 750 pumper delivering 500 gpm at 120 lbs. from a hydrant capable of 1000 gpm at 30 lbs. should be able to deliver perhaps 500 to 600 gpm to the second machine. This machine can then use its pump to increase the pressure for heavy stream operation.

Safeguarding Electrical Equipment on Fire Trucks

ALL fire trucks include numerous electrical devices that are important to their efficient functioning. In addition to the usual truck driving lights and tail lights, there are various electrical warning devices both visual and audible including sirens and flashing lights, front and rear spotlights, and others. On pumping apparatus there are gage lights and compartment lights. Many modern fire trucks are radio equipped and this electrical equipment also must be provided with adequate current.

The problem of maintaining proper charges in fire apparatus batteries is one that is difficult to solve satisfactorily. A good practice is to have a battery charger in the fire station and place the battery on a trickle charge between runs. Some fire trucks have dual batteries or separate batteries for radio and signaling equipment. This alone does not assure that there will be no battery failure because if one battery is held in reserve it may not be ready for a heavy drain when called upon, especially where the batteries depend upon the truck generator for maintaining charge.

Where fire trucks stand by on the fireground with the motor idling and lights running, there may be a considerably greater drain on the battery than normal truck generators can accommodate. More and more fire departments are specifying heavy-duty generators and quite a number are using alternators such as those manufactured by Leece-Neville Company of Cleveland, to provide additional current capacity for powering emergency equipment such as radios and spotlights.

Paid fire departments usually have a good battery inspection and maintenance routine. Apparatus drivers take regular readings of the batteries and the fire department shops have spare batteries fully charged ready to replace those on the apparatus as needed. The problem in volunteer fire departments is much more complicated, especially where the apparatus is not regularly attended. In one instance recently both the pumper and forest fire truck in one station were found to have dead batteries when a weekly check-up was made. This shows the importance of daily readings. Had a fire occurred during the week neither truck would have started.

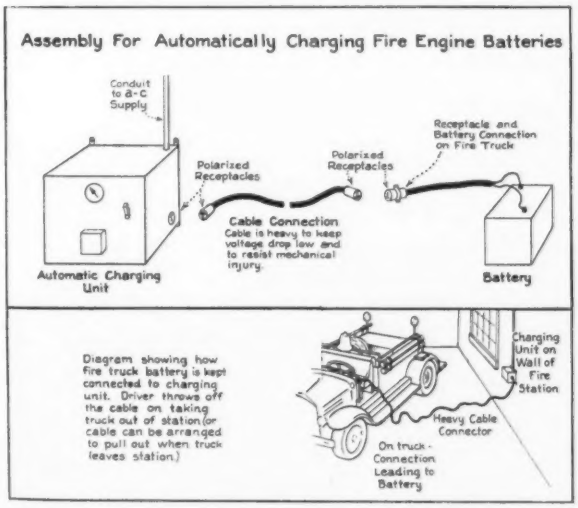

Assembly For Automatically Charging Fire Engine Batteries
Conduit to A-C Supply
Polarized Receptacles
Polarized Receptacles
Receptacle and Battery Connection on Fire Truck
Cable Connection
Cable is heavy to keep voltage drop low and to resist mechanical injury.
Automatic Charging Unit
Battery
Diagram showing how fire truck battery is kept connected to charging unit. Driver throws off the cable on taking truck out of station (or cable can be arranged to pull out when truck leaves station.)
Charging Unit on Wall of Fire Station
Heavy Cable Connector
On truck - Connection Leading to Battery

Diagram of automatic charging of fire apparatus batteries from NFPA Standard "Volunteer Fire Departments." Each week the storage battery solution should be tested by a hydrometer and recharging performed as necessary.

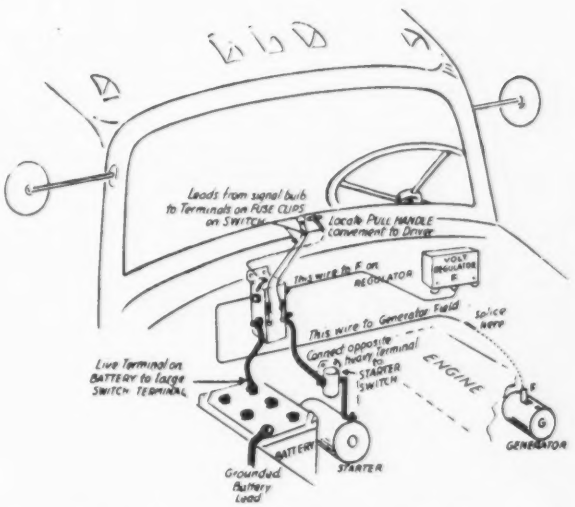


Diagram of wiring of the "Mak-Saf" system of wiring supervision of the Rochester Manufacturing Co.

Part of the difficulty in maintaining batteries in an unattended fire station is the probable likelihood that some light or electrical device will be inadvertently left on when the truck is returned to quarters. It is easy to overlook gage lights or other devices that will place a small but steady drain on the battery when the truck is put back "on the track." Fortunately, this danger can readily be overcome by any fire department through a simple electrical control or monitor device which can be self-installed by the department. Such a device is "Mak-Saf" manufactured by the Rochester Manufacturing Company of Rochester, New York, which provides a dashboard control handle and a pilot light. When the handle is pulled out upon returning the truck to quarters, the light glows until all switches and accessories are turned off. If the pilot light still glows, this indicates that there is a short or ground in the wiring. However, if the short or ground cannot be located, there will be no immediate damage. With the light on, the device will protect the circuits against fire and prevent a drain of more than 1 amp. The control device also will permit temporary correction of an overcharge by a faulty voltage regulator and may be used to protect electrical equipment in the event of a short circuit while the truck is in operation. The pilot light also assists mechanics in locating any abnormal electrical conditions in the vehicle wiring or equipment.

It is recommended that each fire department have the electrical wiring and devices on their fire trucks checked at frequent intervals as the finest fire fighting vehicle may not function properly in event of electrical failure.

Improvements in Fire Equipment at Pittsfield, Mass.

View of new training grounds showing 5-story drill tower equipped with automatic sprinklers and smoke room, new American-LaFrance aerial ladder and pumper, pump test basin at right.

Chief Thomas F. Burke, host to the September meeting of the Massachusetts Fire Chiefs' Club.

Rockwood fog nozzle on ladder pipe supplied by three 2½-in. lines siamesed into 100-ft. line of 3-in. hose. Foam can be discharged through this nozzle.

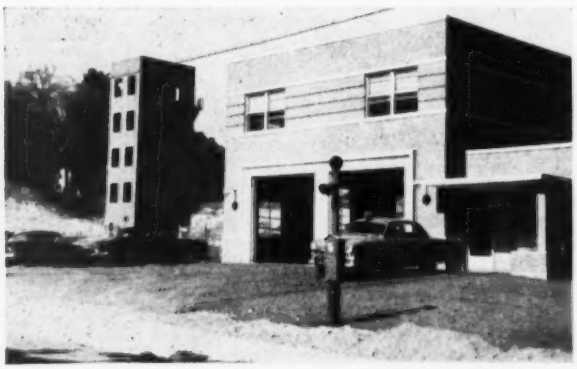
ON September 19, the Pittsfield Fire Department under Chief Thomas F. Burke was host to the Massachusetts Fire Chiefs' Club and demonstrated numerous improvements recently made in the city's fire defenses following recommendations of a "Mayor's Committee." New fire defenses shown to the chiefs included two handsome new fire houses one of which houses a new fire company; a new fire training ground with completely equipped drill tower; a new aerial ladder and a new pumper with both foam and wet water proportioners; fog and foam nozzles; and a department with all companies radio equipped.

Future plans call for at least two additional new fire stations to protect the eastern and southern sections of the community which is the commercial metropolis of the Berkshire Mountains area of western Massachusetts some 140 miles from Boston. Pittsfield is also the home of a large General Electric Company plant.

Demonstration of 1½-in. Rockwood fog-foam nozzle supplied by built-in Rockwood foam proportioner on the new American-LaFrance pumper. It is said that the device can proportion foam for the full capacity of the pumper.

New Co. No. 1 fire station (not headquarters) on west side. In addition to a 1000 gpm pumper the station houses a hose wagon. A new pumper is on order.

New station for Co. 5 adjacent to fire department training grounds and drill tower. The station is large enough to accommodate a future ladder company. A rear apparatus door gives direct access to the drill yard. Note the Gamewell fire alarm box with traffic warning siren.



Gas Explosions in Brighton, New York

ON the afternoon of September 21, 1951, in the suburban town of Brighton, New York, Mrs. Verda Durham was performing her usual duties as housekeeper in the home of William Maas, Jr. With her were eight-year-old Mary Ann Maas and five-year-old William Maas. Outside the home, sixteen-year-old Hugh Crilley was mowing the lawn.

Mrs. Durham was having trouble with the pilot on the gas stove and called her employer to report the difficulty. That was the last contact William Maas had with his family, for soon after Mrs. Durham hung up the phone there was a terrific explosion which blew the house apart.

Firemen found Mrs. Durham alive, but badly injured, in the debris that filled the cellar. Mary Ann and William died in the explosion and fire. Hugh Crilley, on the lawn outside, received first and second degree burns on the hands, arms, and face, and other injuries to his left arm.

Elsewhere about the area eleven other houses exploded and 28 additional dwellings caught fire from abnormal internal gas flames or from exposure fires.

THE origin of the trouble was at an underground vault built in two sections, each about eight feet square, underneath a sidewalk in the central part of town, near Brighton Fire Department's No. 3 Station. Located in these underground vaults were two sets of gas regulators in parallel. One consisted of four-inch high and low pressure regulators on a four-inch main, the other, a similar set of six-inch regulators on a six-inch main.

The exact cause of the explosion is not known. Workmen had just finished sidewalk work in this area and were moving their equipment away when a terrific explosion occurred in the vault, blowing off the concrete roof. Fire followed the blast. Heavy pieces of the roof fell into the vault and struck and seriously damaged both high and low pressure regulators so that full gas pressure of approximately thirty pounds per square inch entered the low-pressure piping.

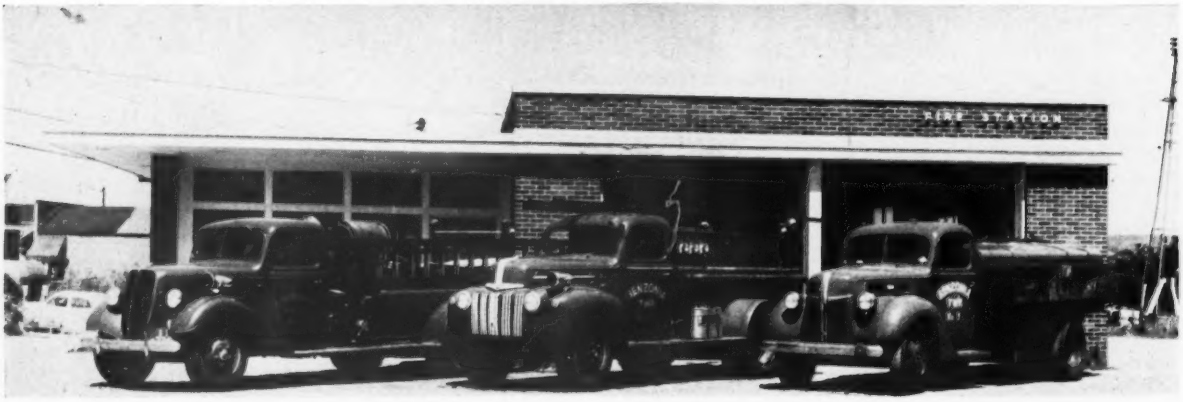
Two members of Brighton No. 3 Station were on duty at 1:14 P.M. when the alarm was logged. Upon responding to the scene, one man connected to a hydrant near the vault and started the pump, while the other man advanced to the vault with a spray stream to protect exposures and permit close approach. (The gas was allowed to burn until the source of the leaking gas could be cut off.)

Police and gas and electric company men responded immediately when the first explosion occurred. The mutual aid system of the fire departments in the Monroe County area was put into operation with good results.

In addition to the two Maas children a seventy-seven-year-old woman died of a heart attack. Low loss of life can be attributed to prompt spreading of information by radio and police public address cars, the quick thinking and good judgment of many of the residents and the good weather which found many residents out-of-doors at the time of the explosions.

The top picture shows a closer view of the scene that appears on the cover of this month's FIREMEN. Eleven other houses exploded in a similar manner in this suburban district. The gas piping in this area was a low pressure installation without regulators at individual houses. The high pressure gas entering this system caused burners to shoot up, and, in many cases, the tin case gas meters were ruptured, allowing free escape of gas into basements. Center picture shows fire fighters and other volunteers attempting to control an exposure fire, while the bottom picture shows the remains of the Maas home where two children were killed. (*Photos courtesy of Rochester Democrat and Chronicle.*)

NFPA Member Departments



Benzonia Township, Michigan, Volunteer Fire Department

SHOWN above is the apparatus used by this department to protect Benzonia Township and the two villages of Benzonia and Beulah. On the left is a 500 gpm pumper with a 200-gallon tank. The center truck has a 200 gpm pump and a 500-gallon tank. On the right is a water truck with a 1000-gallon tank and a 100 gpm pump, housed by the Highway Department used at fires in outlying districts.

Chief Willard Carmien and Assistant Chiefs Donald Rankin and Ed Anderson head the 23 members of the Department. The township purchases all apparatus and equipment while the villages of Beulah and Benzonia pay the cost of maintenance. For calls to adjoining communities a charge of $100 per run is made.

West Suburban Fire Protection District, Rockford, Illinois

CHIEF Harry E. Ritter, Assistant Chief Everett Elliott, and Secretary Alvin Kirby head this department of 35 active fire fighters. At present the department has a 500 gpm pumper with a 500-gallon booster tank, and an 1100-gallon water truck. Plans are being made to install two-way radio on all apparatus and to purchase a small pumper.

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West Memphis, Arkansas, Fire Department

HEADED by Chief Whit Murphy (president of the Arkansas State Firemen's Association and a member of the State Advisory Committee on Firemen's Training) and Assistant Chief Arthur Goe, this department protects an area containing a population of 11,000 and a mercantile district bounded on three sides by gasoline and butane bulk tanks.

The department has two pumper companies, each with a captain and eight men. Training is under the supervision of the Arkansas State Fire Instructor. Drills are compulsory and are held twice monthly throughout the year. Special 10-hour study courses are held every six months.

At present the fire station is in the rear of the building (shown below) which houses the West Memphis City Hall. Apparatus consists of a 750 gpm Class A American LaFrance pumper, a 600 gpm Class B American Marsh pump on an International K-7 chassis, and a 500 gpm Barton front mount pump on a 1936 Ford chassis. The latter is used on a stand-by basis. The other two pumpers and the Chief's car are equipped with two-way radio. An ultra-modern fire station is now being designed to house this apparatus.

The Department's 22 active members have completed a Standard First Aid Course and are now receiving refresher training in rescue practices. A Women's Auxiliary consisting of 14 members assists the Department in sponsoring an annual ball and a talent show.

Prefire Planning at 12th U. S. Naval District

O. J. Emory (Member of NFPA), Fire Protection Coordinator, Office of the Chief of Naval Operations, U. S. Navy Department, suggests that readers of FIREMEN might be interested in an article on Pre-Fire Planning published in a bulletin from the 12th Naval District. It is believed that a number of fire departments may find of interest the procedures followed in planning for major fire fighting operations by the fire service of a typical naval district.

FIRE chiefs in district activities are required to effect adequate strategical planning and develop tactical procedures for carrying out fire-fighting operations for each building in their activity. The U. S. Navy Structural Fire-fighting Manual, Page 30, states in part, "The Fire Department should have complete knowledge about every feature of the property under its protection that might conceivably affect its operations."

The District Fire Marshal is required to evaluate prefire planning practices in inspection reports and initiate prefire planning to the extent of assisting, as may be necessary, in developing plans through to completion for one building. The importance of this phase of required training cannot be over-emphasized. Large fires, requiring real generalship in their handling, are few in number in any one activity. They number less than 0.5 per cent of total fires. For this reason, it takes a lifetime for an individual to gain the knowledge necessary for command of fire-fighting forces at serious fires if he is to depend on his own experiences in actual fire-fighting.

THE job of prefire planning is the formulating of detailed strategic and tactical plans for extinguishment of any type of fire that may occur in a building or area of an activity, and the indoctrination of the entire fire department in every pertinent detail of these plans. Separate plans must be developed for each building and kept up to date. It is realized that this is a time-consuming job but is the best method of developing efficient fire-fighting methods and providing for their execution in the event of fire.

The prefire planning inspection program should stress the practical side. Inspections should be made by entire companies. Where two-way radio equipment is provided for fire apparatus, there should be no hindrance to a continuous prefire planning inspection program as fire alarms can be received by radio. In activities where the fire department strength is such that one or more units of fire apparatus is on second alarm, one company should be scheduled daily for a prefire planning inspection (weather and other circumstances permitting), and placed on second alarm response during the time out on this duty.

Drills should be conducted so that not only will the elementary fire problem (in which a booster line or one 2½-in. line is sufficient) be well handled, but the fire chief must also be prepared to bring all the pumping capacity to bear as quickly as possible. Consequently each type of building should be studied and gone over by the entire fire department from a fire-fighting standpoint.

PROCURE a plan, or make a plan of the building; make a circuit of the building noting exposures, accessibility for fire-fighting and overhead obstructions such as electric wires or other obstacles which would interfere with the placing of ladders for rescue work or fire fighting. Note available hydrants, size of mains, any auxiliary water supplies, exits, entrances, and the closest fire alarm box, also standpipes and fire escapes.

Try out all outside standpipe connections for fire department use. For this purpose take along male and female fire hose connections.

Inspect building from basement to roof noting building construction, height, extent, occupancy, contents, floor areas, fire doors and other fire stops, also stairways, vertical openings, partitions, floor construction and window openings. Note any hazards inherent to storage or industrial processes carried on.

Note all fire-fighting appliances in building; if sprinklered, and if outside fire department connection is provided.

Examine heating, ventilating, and lighting systems.

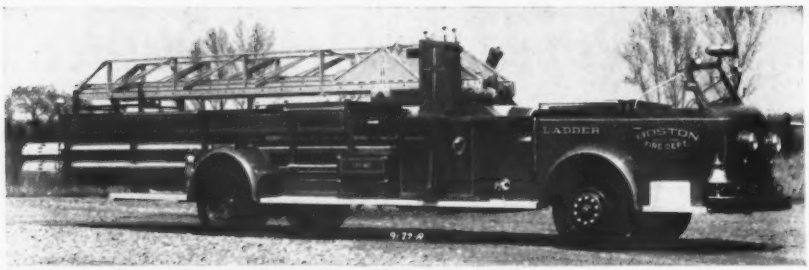
Count the number of occupants on each floor, if any, and note the exit and rescue facilities.

Mark the strategic points for placing fire hose lines to surround fire and cut off travel, considering each section of building.

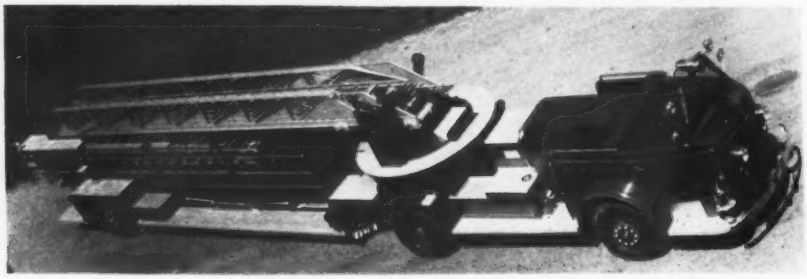
Transfer details of inspection to floor plan or notebook. By using Sanborn Map symbols, details of construction may be noted on plan. This plan should be used in blackboard demonstrations for instruction later at the fire house, where extended discussion may be held.

IT is realized that the element of judgment in handling the larger fires in buildings requires caution in laying down any hard and fast rules of procedure. There are variable factors including climatic conditions — force of the wind and relative humidity. The fire chief when arriving at the fire must be able to size up the situation quickly from all angles. This is where knowledge of all the factors involved, gained from inspection of the buildings, if put to effective use, will give good results in sizeup, proper placing of first and second alarm companies, saving life, protection of exposures, and calling for additional help.

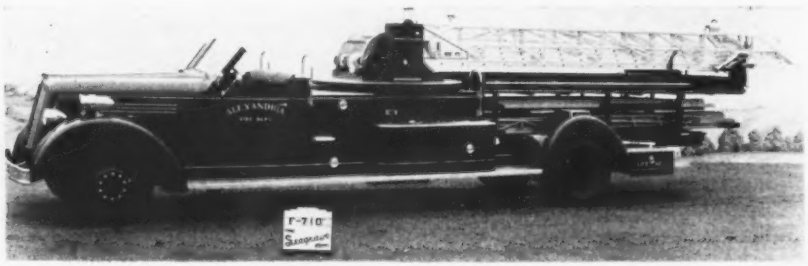
The majority of buildings in district activities are detached, and fire spread is retarded by adequate spacing between buildings in most cases, so that fire should not spread beyond the building of origin. Under these circumstances the protection of outside exposures by the fire department is an elementary problem in fire fighting. The protection of internal exposures is not so simple, and brings up the problem of ventilation, which requires experience and training. Strategic points to place lines and surround fire and confine it to the section of the building involved, should be located during building inspection and also the problems of when, where, and how to ventilate should be thought out and discussed.



American-LaFrance-Foamite Corporation, Elmira, New York
4-wheel, 65-ft. steel aerial ladder truck, cab ahead of engine design, 220-in. wheelbase, 37-ft. turning radius, 5-man seating, 215- or 275-hp. V-12 engine.



American-LaFrance-Foamite Corporation, Elmira, New York
4-wheel, 100-ft. steel aerial ladder truck, closed cab with 5-man seating; 37-ft. turning radius; all aerial operations hydraulically controlled from pedestal; distance between ground jacks 145 in.



Seagrave Corporation, Columbus, Ohio
85-ft. service aerial truck with steel aerial and Seagrave wooden ground ladders. Note ladder pipe.

Maxim Motor Company Middleboro, Massachusetts
65-ft. aerial ladder with 7-man canopy cab, all steel aerial ladder with fully hydraulic control. Maxim wooden ground ladders.

Maxim Motor Company, Middleboro, Massachusetts
75-ft. steel aerial ladder with full hydraulic control, booster pump equipment, equipment compartment over ladder bed. Maxim wooden ground ladders.

Latest in Aerial Lad

THE September and October, 1951, issues of FIREMEN carried displays of rural and heavy duty fire department pumpers. As a continuation of the series here is a display of the latest in aerial ladders made by five of the leading manufacturers.

These photographs show both the "service type" aerials and tractor-drawn aerials. In general, both types carry the same fire-fighting equipment with the individual customer deciding the type of chassis and length of ladder as dictated by the needs of his department.

NFPA SPECIFICATIONS ON MOTOR FIRE APPARATUS FOR 1951 include detailed specifications on aerial ladders covering performance and construction, detailed provisions on

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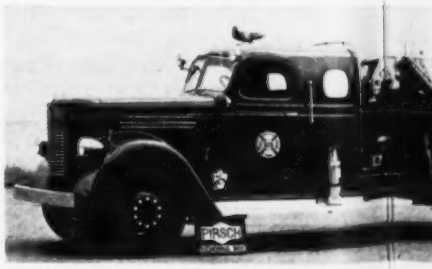
Peter Pirsch & Sons Co., Kenosha, Wisconsin
50- or 55-ft. junior aerial ladder with electrically operat
aluminum alloy ground ladders. Wooden ground ladder



Peter Pirsch & Sons Co., Kenosha, Wisconsin
Intermediate aerial ladder with canopy cab ava
ladder and aluminum alloy or wood ground lad

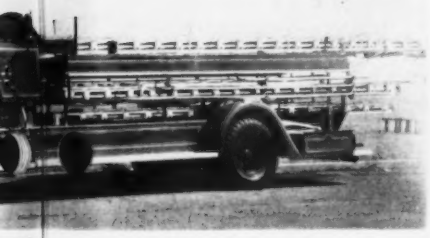
Seagrave Corporation, Columbus, Ohio
65-ft. service aerial truck with steel aerial and Seag
pump equipment.

ial Ladder Trucks

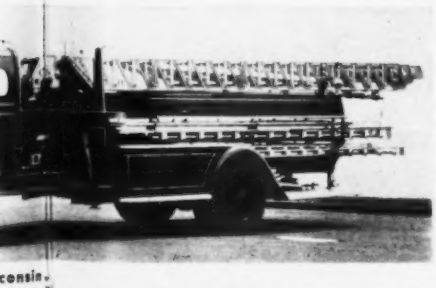
aerial ladders, proper ladder jacks a[illegible]oth basic and extra equipment to be provided.

The aerial ladder is perhaps the most expensive single purchase of equipment made by many fire departments and careful attention to detailed purchase specifications is in order so that the apparatus will be fully equipped and ready for service when received.

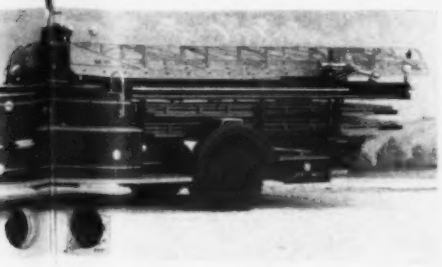
It is usually advisable to allow $1,000–$2,000 for the purchase of extra fire-fighting tools and appliances when making appropriations for a major item such as an aerial ladder truck. NFPA Standard Specifications call for a booster tank and pump so that the ladder truck will be a self-contained fire-fighting unit.



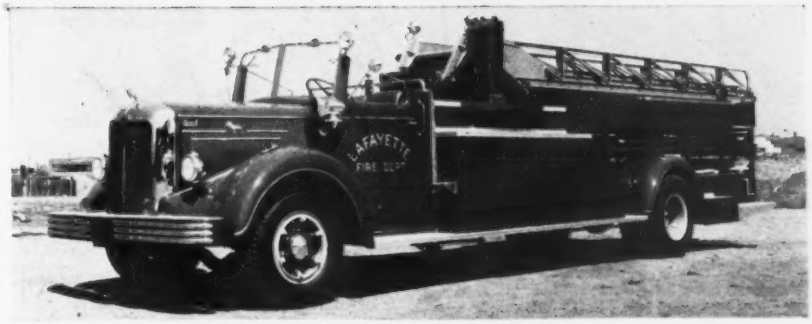
consin
ctrically operated aluminum alloy main ladder and Pirsch
ground ladders available.



consin.
ab available with 65-, 75- or 85-ft. main aluminum alloy
nd ladders.

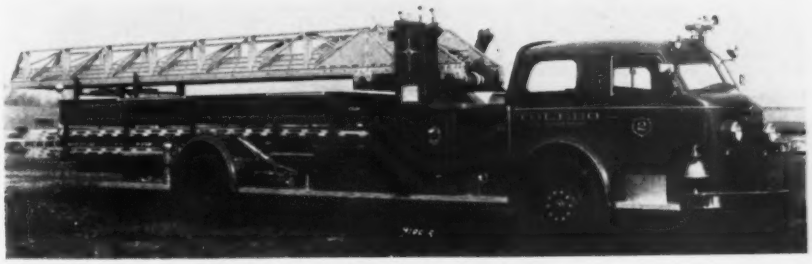


Eal and Seagrave wooden ground ladders plus booster

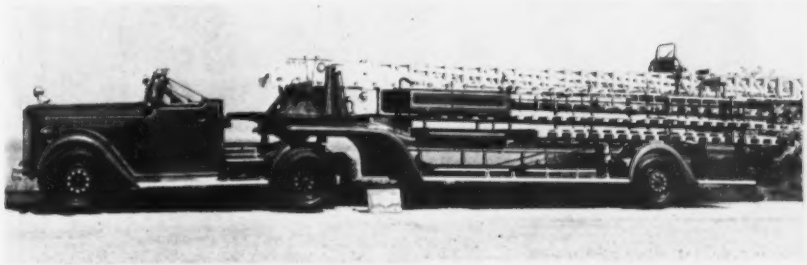


Mack Manufacturing Corporation, Long Island City, New York
65-ft. steel aerial with wooden ground ladders. Booster reel at rear. Note generous equipment compartments.

American-LaFrance-Foamite Corporation, Elmira, New York
85-ft. tractor-drawn steel aerial, canopy cab with 5-man seating. 26-ft. turning radius, V-12, 275-hp. engine, wooden ground ladders, Alfco light weight (20 lb.) ladder pipe on running board.



American-LaFrance-Foamite Corporation, Elmira, New York
100-ft. tractor-drawn steel aerial ladder with aluminum ground ladders, 5-man seating in open cab.



Peter Pirsch & Sons Co., Kenosha, Wisconsin
Senior tractor-trailer aerial ladder with semi-cab; built with 75-, 85- or 100-ft. aluminum alloy main ladders and Pirsch wood or aluminum alloy ground ladders.

Seagrave Corporation, Columbus, Ohio
85-ft. tractor-drawn steel aerial, 12-cylinder motor; Seagrave trussed ground ladders.

Friend of the Firefighter!

MIDWESTERN
PROTECTIVE CLOTHING

for Men of Action!

Modern fire fighting calls for *specialized* protective clothing that safeguards the fireman's life on every run . . . clothing that enables him to use his equipment to the fullest advantage.

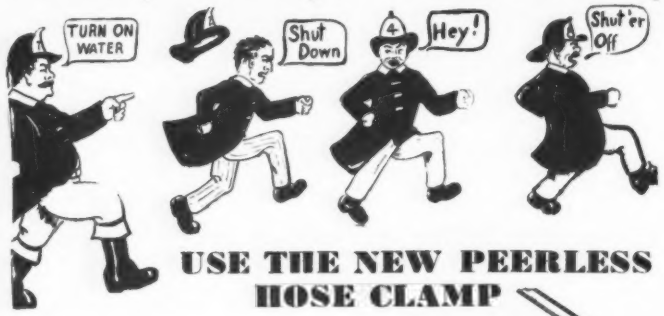
Every Midwestern product combines the thoughts and suggestions of practical Fire Chiefs and firemen from every section of the country . . . and every purchaser profits from years of Midwestern research and experience. That is why the famous Mackinaw Coat and other Midwestern clothing have embodied in their design every feature necessary for the protection and comfort of firemen.

In our vast selection of rubber materials you will find a type of fabric suitable for your climate and needs. The softness and flexibility of the high-grade materials used are your assurance of long time service and comfort.

Due to government requirements for Midwestern Protective Clothing, it will assist in prompt delivery if you place your order early. For complete information, have your Midwestern dealer show you our full line. A letter to the factory will also bring you material samples for your inspection.

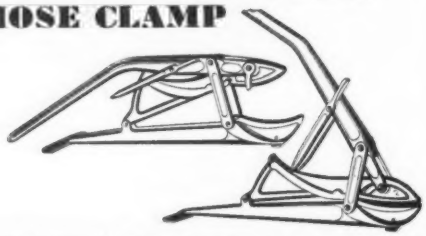
MIDWESTERN MFG. CO., Mackinaw, Illinois
Manufacturers of the Famous **MACKINAW Coats**

"Chasing" belongs to the Old Days



USE THE NEW PEERLESS HOSE CLAMP

MAKING CHANGES—
LESS MEN NEEDED
LESS TIME REQUIRED
(HANDLE LINES EMPTY)



CLAMP FLAT HOSE — CHECK WATER IN FRONT OF FIRE OR AT FOOT OF LADDER — LESS EFFORT CARRYING LINES UP LADDERS — STAIRWAYS — FIRE ESCAPES — NO TIME LOST WAITING FOR WATER.

IF A MAN CAN SEE THE MOON, HE CAN SEE THE DIFFERENCE BETWEEN THE PEERLESS AND ALL THE SUBSTITUTES

For Sale by Dealers in Fire Supplies
Patented U. S. and Canada by

KELLAM MANUFACTURING CO., Box 729, Atlanta, Ga.

Making a Good Job

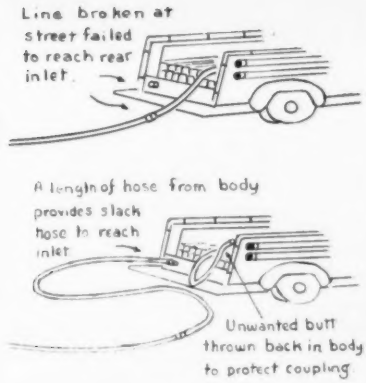
(*Continued from page 12*)

further away. The suction or intake gage on the first pumper shows a good residual pressure indicating that ample water is still available at the first hydrant. It is assumed the pumper already there is working at near its capacity and is unable to supply two more lines at the desired pressure. It then may be advisable to connect a second pumper to this hydrant rather than to lay several long lines which would require a pump pressure of 200 to 250 lbs. and reduce the output of the second machine by 50 percent or more.

Shown on page 12 are some of the ways in which two pumpers are connected to share a hydrant in various departments. In Boston, Massachusetts, for example, for many years it has been the practice of any pumper crew first connecting to a hydrant to attach a gate to a 2½-in. outlet for a second pumper. This is done before water is turned on. This keeps all the lines around a fire short and makes it easy for a hose crew to inform their pump operator of their position and desired pressure changes. This is not the case where late arriving pumpers are several blocks from the fire. Where the water distribution system permits, it is much more efficient to have 8 pumpers at the 4 nearest hydrants each supplying two lines (16 lines).

New FDIC Dates

THE dates of the 24th Fire Department Instructors Conference at Memphis, Tennessee, have been changed to January 8 to 11, 1952, inclusive. Further information on this important conference will appear in future issues of FIREMEN.

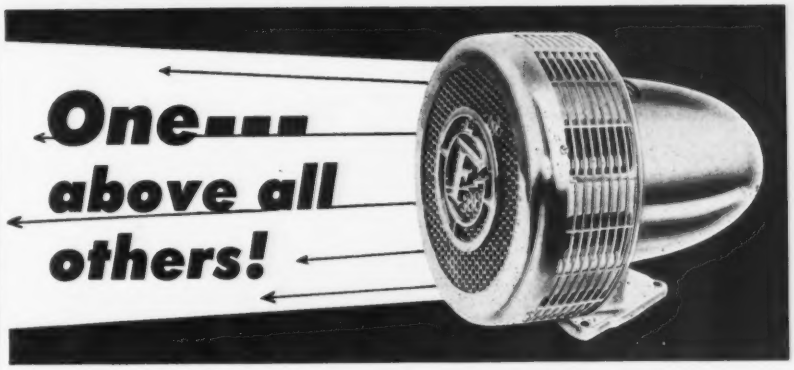

Line broken at street failed to reach rear inlet.
A length of hose from body provides slack hose to reach inlet
Unwanted butt thrown back in body to protect coupling

Always Break Line at Coupling Taken from the Hose Body

RECENTLY, when making a hose layout, a pumper stopped by chance with a coupling on the ground within two feet of the tailboard. After placing the small lines in operation, the operator ran around to break the line laid from a hydrant so as to connect it to the rear pumper inlet. He broke the hose at the coupling on the ground but then no amount of tugging would provide enough slack hose to reach the pumper inlet. It was necessary to shut down the small lines and back up the truck to make the connection.

Fortunately, if embarrassingly, all of this happened at a fire school demonstration rather than at a fire, but it brings to mind the old adage "never lay out short." To be sure of enough hose to reach any pumper connection and to provide enough hose to give mobility in an emergency, the rule is, "in breaking a line laid from a truck always break a coupling pulled from the wagon."

"Sweeney! Is that your idea of a doughnut roll or of a pretzel?"



Federal's *new* Q siren - *Tops in Quality*... in Volume

One siren can be heard above all others, in fact all traffic noises . . . it's the Federal Q -- the newest, greatest siren ever developed! See any siren on the market . . . the Q is the best!

You get greater sound output, greater penetration and longer coasting than with any other siren in the emergency vehicle field.

Assure your vehicles of the finest sound protection available. Specify the Federal Q siren. Write for bulletin 301 today!

FEDERAL ENTERPRISES, INC.

Formerly: FEDERAL ELECTRIC COMPANY, INC.

8717 SOUTH STATE STREET CHICAGO 19, ILLINOIS

SENSIBLE

FOR ALL YOUR HOSE CONNECTIONS

improved

SENSIBLE

LUG COUPLINGS

insure

QUALITY *and* SAFETY

The improved Powhatan "Sensible-Lug Couplings" are precision tooled and manufactured of only the best high grade materials. They set a standard that is "tops" in this specialized field of fire-fighting equipment. The curved surfaces of this modern coupling enable the hose to glide easily over all obstructions, thus preventing snagging, an important safety and economical feature appreciated by those who know.

Specify "Sensible"

POWHATAN BRASS and IRON WORKS

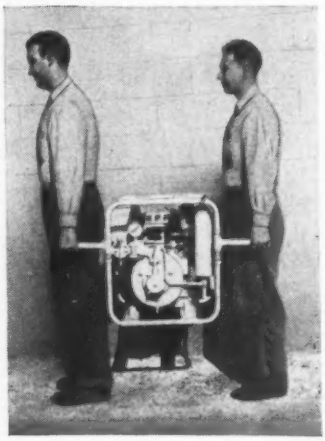
RANSON, WEST VIRGINIA

Phones 93 & 94 Charles Town, West Virginia

Established 1892

Hale Type FZZ

• Quick-Starting • Portable
• Compact • Powerful
• Versatile



Above — Frame-mounted FZZ can be easily carried by two men. It is also available mounted on rubber cushioned steel channels, or on two truck-type wheels.

Fire Companies frequently write us telling of the many practical ways they use their portable Hale type FZZ, such as the following:

- For fighting field or forest fires from moving trucks.
- For "wetting down" and standby use, thus releasing major equipment.
- For pumping out flooded cellars and elevator shafts after fire, flood or other emergency.
- For relaying water to pump or booster tank from sources inaccessible to major Fire Pumpers.
- For factory protection in fighting fires before major equipment arrives.
- For fighting oil or other type fires requiring foam. (Built-in foam proportioner available when specified.)

The FZZ will supply from draft, 60 GPM at 90 lbs. pump pressure; and 150 GPM at 30 lbs. Can supply two capable streams through 1½-in. lines, using nozzle tips up to ½ in.

Note: Discharge Adapter can be supplied for use with 2½-in. fire hose.

Write for new folder today.
Ask for demonstration.

HALE FIRE PUMP CO.
CONSHOHOCKEN, PA.

Fire Pumps in All Standard Capacities

What is a Fire Department?

FOR many years the State of Wisconsin has had statutes requiring fire departments to have a "hook and ladder truck" as well as a pumper truck, 45 members and 500 ft. of "sound rubber or leather hose," and further specifying that "any town not providing fire-fighting apparatus and equipment for extinguishing fires in such town shall be liable for the services of any fire department in fighting fire and appearing to fight fire in such town upon request."

Last Spring the Rudolph Volunteer Fire Department, an unpaid volunteer group, organized in 1948 by citizens and businessmen of Rudolph, but not a municipality-operated department, took unsuccessful legal action in an attempt to collect $425 from the town in payment for fire service for two years. A county judge gave the decision that the plaintiff had not proven that it was a fire department within the meaning of the statute.

The department has 25 members, a brick and cement block fire station, a 700-gallon Chevrolet tank truck with 250 gpm pump, 600 ft. 1½-in. hose, three extension ladders including a 30-ft. extension, and minor appliances. The Rudolph Fire Department reports that fire departments throughout Wisconsin have responded generously to a request for funds to finance an appeal of the decision to the State Supreme Court.

To the fire service outside of Wisconsin this case may have some interest, not with regard to the merits of whether a particular individual fire department meets any state's requirements regarding fire departments such as those requiring 45 members and a ladder truck; but in the fact that statutes on fire or any other subject, appearing reasonable at time of adoption, may become outmoded with the passage of years. The date of the enactment of this Wisconsin statute is not given specifically but is fairly well indicated by the reference to leather hose which was in general service before the invention of cotton rubber-lined hose. The specific requirement for a ladder truck no doubt goes back to the days of hand fire pumpers which carried no ladders such as are carried on all modern pumpers. In early days the hand drawn (and later the horse-drawn) ladder truck was deemed necessary even in small communities because a large part of the fires involved wooden shingle roofs, and it was not possible to carry a 30-, 35- or 45-ft. ladder on the pumper or tank truck as can be done today. Many small volunteer departments at this time do not require as many as "45 members" such as were needed when pumpers were hand operated and this strenuous work required a large company of men in addition to the nozzlemen and laddermen.

Perhaps other states amd municipalities have laws and ordinances on their statutes regarding fire protection that are as out of date as those in Wisconsin appear to be. A good practice would be to keep legislation regarding fire protection up to date. The Legislative Clearing House of the New York State Firemen's Association (see FIREMEN for January, 1949) attempts to advise on such matters in that state.

NFPA technical committees are constantly at work revising and preparing new editions of NFPA standards and codes regarding fire protection. These are purely advisory as far as the NFPA is concerned but are the basis of up-to-date fire protection legislation in many areas, particularly where it is possible to adopt nationally recognized standards by reference, or where such standards are accepted as meeting good practice requirements.

Out-of-date laws and standards may work a hardship by requiring expenditure of money and effort on forms of protection that are outmoded. In the Rudolph, Wisconsin, situation, it is conceivable that a fire department having 45 aged, untrained members, a hand engine and hand-drawn ladder cart and 500 ft. of leather hose might, without difficulty, have collected sums from the municipality for responding to fire calls without providing any substantial degree of fire protection. On the other hand, an up-to-date department with a modern tank truck appears to have been found disqualified. It would appear that the time to amend any obsolete law is before it works hardship or inequity.

PART AND PARCEL OF

FORD'S

'LOOK AHEAD' POLICY

NEW PARTS DEPOT, CINCINNATI, OHIO

PROTECTED AUTOMATICALLY BY

ADT

The new Ford Parts Depot at Cincinnati, Ohio, has just been completed under a country-wide expansion program described as "part and parcel of Ford's 'Look Ahead' policy to better serve Ford owners."

A criterion of practicability and efficiency, the Cincinnati Depot employs a combination of ADT Central Station Services to provide complete AUTOMATIC protection against fire, burglary and other hazards. These include: ADT Sprinkler Supervisory and Waterflow Alarm and ADT Burglar Alarm Services.

ADT Automatic Protection provides the highest degree of security at the lowest cost. Thousands of progressive business establishments from coast to coast are similarly protected. Descriptive booklets upon request.

ADT

Controlled Companies of

AMERICAN DISTRICT TELEGRAPH COMPANY

155 Sixth Avenue, New York 13, N. Y.

CENTRAL STATIONS IN PRINCIPAL CITIES

FIREWATER

the "Wet Water" that's

- ✓ unconditionally guaranteed
- ✓ lowest in price
- ✓ absolutely non-corrosive

FIREWATER* is the tested and proved chemical penetrant that actual laboratory tests have proved to be no more corrosive than distilled water . . . that is used at a dilution rate of 1:600 for maximum effectiveness . . . that is unconditionally guaranteed!

That's the story that is putting **FIREWATER** in a class by itself among "wet-water" compounds. **FIREWATER** will do the job — safely, efficiently, *and* economically.

Write *today* for more details.

FIREWATER COMPANY
Number 1 First St.
Los Altos, Calif.

Please send me full information on **FIREWATER.**

NAME .....

ADDRESS .....

CITY and STATE.....

The FIREWATER Co.

1 FIRST ST.

LOS ALTOS, CALIF.

* Trade Mark

More About Fire Department Pu

From a report of a sub-committee of the NFPA
(See issues of FIREMEN Ju... through ...

Taking Delivery of a New Pumper

TESTING A NEW PUMPER. When a new pumper is received it should be given acceptance and road tests as outlined in the specifications under which it was bought. These tests serve to assure that the pumper will meet fire fighting requirements or to detect any weaknesses or "bugs." The insurance rating bureau having jurisdiction in the state will usually make the pumping tests free of charge if given advance notice. The address of the bureau may be obtained from the state fire marshal or insurance commissioner.

In most states underwriters acceptance tests are conducted only on models of pumpers similar to one that has previously successfully passed a 12-hour test by the National Board of Fire Underwriters. The pumper to be tested must also have had a 4-hour run-in test at the factory before delivery. Certification of this test should accompany the apparatus.

Tests should be from draft with a suction lift of 10 feet if possible. This requirement may entail testing at a nearby location having good testing facilities.

It is generally true that modern pumpers have less difficulty meeting pumping requirements than they do in meeting road tests. Steep hills, lack of paved streets, sudden starts with cold motors, frequent response to distant alarms, traffic congestion, heavy overloading of apparatus, and winter road conditions are some factors influencing over-the-road performance. As a general consideration a fire truck should be capable of rapid acceleration, rather than of obtaining a high top speed.

The test procedure for pumping and road tests is contained in the NFPA Specifications for Automobile Fire Apparatus.

MANNER OF TRANSPORTATION. Manufacturers of gasoline motor driven equipment recommend that the gasoline motor be run at controlled speeds during the initial "break-in" period. This is to assure that moving parts seat themselves without undue wear from friction that may be caused by the high temperatures produced during high speed operation of new motors.

Fire truck motors should be no exception, whether built by a manufacturer specifically for fire service, or whether the motor is that of a regular commercial truck chassis. Even when assigned to fire duty in busy fire stations of large cities the number of hours of operation of apparatus motors is much less than ordinary civilian experience.

It should be the responsibility of the manufacturer to supervise and complete delivery of a new pumper from the assembly point. If the pumper is driven overland or shipped by common carrier, the driving or unloading should be in charge of a delivery engineer representing the manufacturer.

PLACING PUMPER IN SERVICE. On completion of the required acceptance and road tests the pumper should be carefully examined for any condition that may be below standard. Evidence of leaks, signs of wear, loose or missing bolts, nuts, or cotter pins, rubbing or grating noises, or failure of some parts to function properly, are some items that should be corrected before the pumper is placed in fire service. All grease fittings should be lubricated and the oil in the motor changed. The presence of excessive carbon or metallic particles in the drained oil should be investigated further.

The selection of drivers is of particular importance. Only "level headed" men should receive consideration because of the great responsibility placed on fire truck drivers. It is imperative that the heavy fire pumper be driven so the truck arrives safely at the scene of a fire without mishap to the firemen or the public. A factor of great importance in volunteer fire departments is the availability of the driver on instant notice. A man whose place of work or residence is at a point remote from the fire station is apt to be of less value than a man who is employed or lives close by.

In the interest of efficiency all firemen should have a good understanding of the manner in which the pump is operated. It is ill-advised

ent Pumpers

of the NFPA Committee on Firemen's Training.
...ugh September, 1951, inclusive.)

to limit this knowledge to a chosen few. However there must be clear-cut and well defined regulations governing the department policy for pump operators and their duties. Assistance in gauging driving ability may be gained from the department of public safety in some states or from other agencies that have the necessary testing equipment.

When a new pumper is to be placed in service it is well to look into the possibility of standardizing the placement of equipment and appliances on each pumper. It is an advantage to have all ladders, suction hose, axes, extinguishers, nozzles and other items located in identical places on each pumper. Items of related usage should be placed together. For example, the hard suction hose and suction strainer should be on the same side of the pumper.

When a new pumper is purchased it should be delivered complete with new appliances such as axes, nozzles, and similar items. It is false economy to transfer such equipment from an old pumper to a new one.

●

Water Supplies for Wartime Fire Fighting

THE Federal Civil Defense Administration has released a technical manual on "Water Supplies for Wartime Fire Fighting." The observations of the pamphlet are based on the idea that the regular water utility people will look after the regular public water supply system whereas fire departments will be expected to develop and be responsible for auxiliary water supplies. For copies send 10 cents to the U. S. Government Printing Office, Washington, D. C.

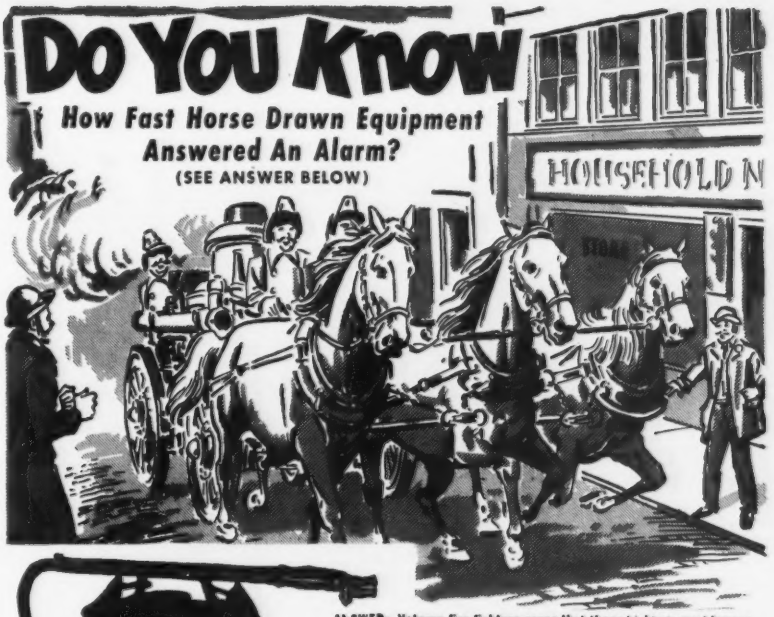
●

FOR SALE

Mack 1925 Hook and Ladder Fire Truck. Ladders and mechanical operation, good; paint, perfect; new tires; hydrovac controlled 4-wheel brakes; approximately 200 feet of ladders.

Mack 1936 Pump and Booster Combination Fire Truck. Model BG; 200 gpm Hale pump; 325-gallon booster tank; hose reel; storage space for 1½-in. hose; mechanically perfect; tires, 1st class condition; pump and tank new 2 years ago; motor rebuilt 1 year ago.

Fred J. Schindler, Chairman of the Board, Huntington Manor Fire District, Huntington Station, New York



ANSWER: Veteran fire fighters agree that these highly trained horses charged from their stalls, were in harness and off to the fire in LESS THAN HALF A MINUTE after an alarm was received.

You Can Also Go Into Action FAST With

INDIAN FIRE PUMPS

Modern, up-to-date fire truck with INDIAN FIRE PUMPS mounted in place.

Today's fire departments, foresters, lumbermen, campers and private citizens find INDIAN FIRE PUMPS the answer to their need for speedy fire fighting.

A man with one of these famous back-pack extinguishers won't lose a minute attacking fires on roofs, in fields, brush, in buildings, rooms or rubbish. When seconds count—use INDIANS.

INDIAN FIRE PUMPS are ideally suited for Civil Defense work. Send for catalog.

Smith INDIAN Backfiring Drip Torch
Widely used for slash disposal, burning right of way, etc. 1 gal. tank. Brass feed pipe. Strong construction. Designed for fire dept. backfiring work.

Smith INDIAN Drinking Water & Supply Tank
For carrying drinking water to fire fighting crews, and refilling Indian Fire Pumps. 5-gal. capacity. Push button faucet. Carries by handle or slung on back.

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Get a supply of INDIAN FIRE PUMPS now to protect your home, buildings and property against fire bombs. This is important.
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Gives 10 Times More Light

PAYS FOR ITSELF IN 3 MONTHS

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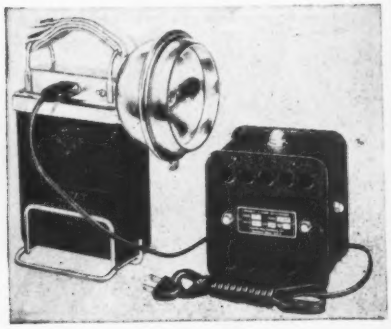

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WHEAT CHARGE INDICATOR

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FOLDING CHAIRS *in* STEEL or WOOD

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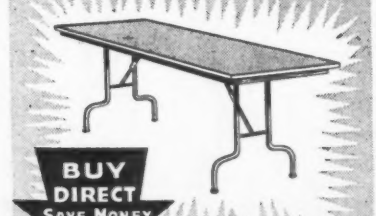

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SAVE MONEY and TIME

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Dept. 97 - Scranton 2, Pa.

Alexandria, Virginia, Paper Warehouse

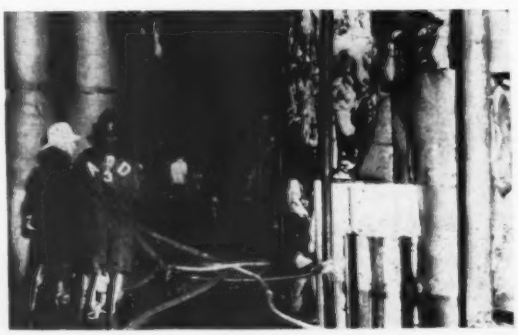
ON August 24, the Alexandria, Virginia, Fire Department, headed by Chief Bernard J. Padgett (Member NFPA) received an alarm for a fire in the Robinson Terminal Warehouse. The alarm was transmitted by automatic rate of rise alarm, by manual box alarm, and by telephone, but the fire had a quick start and despite prompt arrival of apparatus the building was heavily involved.

Upon arrival of first apparatus a second alarm was transmitted by the Assistant Chief, followed by 8 special radio alarms by the Chief Engineer of the Alexandria Fire Department.

ALTOGETHER 7 engine companies, 2 hose companies, 2 ladder companies, a squad wagon, and a fireboat from the Washington, D. C., Fire Department responded. A total of 8,600 feet of 2½-in. hose was used as well as 750 feet of 1½-in. hose, two 100-foot aerial ladders and 375 feet of ground ladders. The fireboat *William T. Belt* pumped for 2 hours and 15 minutes, while total engine pumping service from ground and land units was 29 hours and 15 minutes. Three 1,250 gpm pumpers, four 750 gpm pumpers, and a 500 gpm pumper were used by the Alexandria Fire Department.

The warehouse was a one-story concrete structure, 150 x 350 feet in area, with a metal, tar paper and slag roof, and was used for storage of rolled paper. There was one wall (with six unprotected openings) in the center of the building. The fire spread rapidly across the tops of the paper rolls and under the roof.

The north end of the building was kept closed and while the cellar nozzles were used from the roof of the building to wet down the tops of the paper rolls, the fire was covered by 3 lines from 2 doors on the west side of the building and 2 lines from the inside of the south side. The fire was controlled within 40 minutes after the first alarm.



Total damage of this fire was estimated at $200,000. Eighteen fire fighters were injured but despite the rapid start of the fire a good stop was made and much of the paper stock was saved.

Membership Report

READERS of FIREMEN no doubt have noticed that the magazine no longer is being mailed in envelopes. This change was necessitated by the scarcity and high price of paper suitable for making envelopes. As far as can be determined, most magazines are being received in good condition, but where this is not true, the matter should be referred to postal authorities so that steps can be taken to see that the publications receive proper handling. If any regular subscribers are not receiving the magazine properly the editors would like to hear from them.

NFPA Welcomes:

The following fire chiefs and fire departments. Present NFPA Fire Department Membership totals 1,589 fire departments and 20,557 men.

Canada. Chief Andrew W. Brown, Dalhousie, New Brunswick.

Illinois: Chief E. W. Johnson Aircraft Engine Division, Ford Motor Company, Chicago; Danville Fire Department, Danville; Elburn and Countryside Fire Department, Elburn; Wilmington Volunteer Fire Department, Wilmington.

Indiana. Frankfort Fire Department, Frankfort.

Kentucky. F. H. McGraw & Company, Paducah.

Massachusetts. William J. Creedon, Milton.

Michigan. Trenton Fire Department, Trenton.

New Jersey. Norma-Alliance Volunteer Fire Company, Norma.

New York. Fly Creek Volunteer Fire Department, Fly Creek.

North Carolina. Chief Donald S. Charles, Charlotte Fire Department, Charlotte; Chief M. G. Brown, Winston-Salem Fire Department, Winston-Salem.

Ohio. College Corner Volunteer Fire Department, College Corner.

Oregon. Empire Volunteer Fire Department, Empire.

Tennessee. Elizabethton Fire Department, Elizabethton; Chief H. D. Demonbreun, Nashville Fire Department, Nashville.

Vermont. Middlebury Fire Department, Middlebury.

Virginia. Falls Church Volunteer Fire Department, Incorporated, Falls Church.

Washington. Chief Jim Hale, College Place.

Wisconsin. Lake Mills Volunteer Fire Department, Lake Mills; Wautoma Volunteer Fire Department, Wautoma.

WOULD YOU PAY JUST $60 TO MULTIPLY THE EFFECTIVENESS OF YOUR FIRE-FIGHTING EQUIPMENT?

It wasn't long ago that it was impossible for most fire trucks to handle bad spill fires or fires over any great area.

And there was often real trouble when they had to go beyond the range of regular water supply. They had only as much extinguishing agent as the capacity of the water tank on the truck. They had no way to "stretch" it. Once their 100 to 200 gallons was gone, they were finished.

Is *your* department still struggling against these obsolete limitations?

Well, it needn't. Not any more. You can modernize every truck you have—make it effective for gasoline and oil fires—increase mightily its fire-killing power on ordinary combustibles when water supply is limited.

And you can do it for the staggeringly low price of just $60 per truck!

Air Foam Playpipes—the modern way to step up fire-fighting effectiveness

The secret of increased fire-killing power is *air foam*—that remarkable tried-and-tested invention. With one gallon of Pyrene* Air Foam Compound and 20 gallons of water, you can produce 350 gallons of fast-acting air foam—the *sure* agent for blanketing fire and keeping it from reflashing. And you can do it *instantly*—with no complicated apparatus, no difficult operating tricks. You simply connect a Pyrene Air Foam Playpipe to a hose line. It automatically mixes foam compound and water to produce and discharge huge quantities of air foam. One man can operate the playpipe anywhere your hose lines can go. What's more, it can discharge either foam or plain water.

Think of it! With a 100 gallon water tank, *you can produce 1,750 gallons of air foam*—even though it should be impossible to get more water! And air foam fully equips you to fight flammable liquid fires, as well as those in ordinary combustibles.

Complete outfit—playpipe, pickup tube, adapter, foam compound—only $60

This is no scatterbrained idea dreamed up by some wild-eyed inventor. This equipment was developed by Pyrene—the most honored name in the fire extinguishing field—the acknowledged leader. Right now, this equipment is in use in thousands of fire departments all over the country. Everywhere, they are enthusiastic about the tremendous job this equipment is doing.

It can do the same kind of job for you—and at a phenomenally low price. You can have a Pyrene Air Foam Playpipe, a pickup tube, a hose adapter and four gallons of foam compound for just $60. That's all you need! Nothing to replace except the foam compound. No installation. Your $60 takes care of everything!

*T.M. Reg. U.S. Pat. Off.

Send coupon today—no obligation

Your department owes it to itself to have a good look at this remarkable equipment. All you need do to arrange such a look—with no obligation whatsoever to buy—is to send the coupon. We'll take care of the rest. Send it right now—don't give yourself a chance to forget!

PYRENE MANUFACTURING CO.
(Affiliated with C-O-Two Fire Equipment Co.)
587 Belmont Ave., Newark 8, New Jersey

Yes, we'd like to see how the Pyrene Air Foam Playpipe can multiply the effectiveness of our fire-fighting equipment for just $60. I understand we are under no obligation whatsoever to buy. Have someone come around to our firehouse on _____ (date) at _____ (time).

We can't wait! Send us _____ sets of model PP14 Pyrene Playpipes, Foam Compound, etc., @ $60 each. Our hose thread size is _____.

My name _____

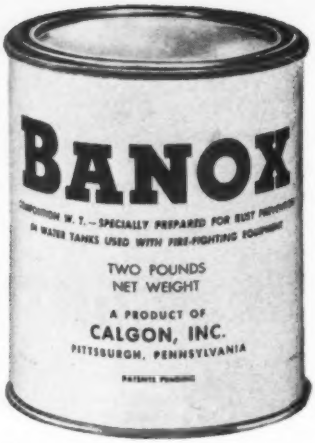
Name of our department _____

Department address _____

City or town _____ State _____

My position _____

STOP TANK RUST WITH BANOX*



Now you can prevent costly rust or corrosion in your water tanks with new Banox (Composition W.T.). Specially developed to protect fire-fighting equipment, Banox has proven effective in preventing corrosion in all kinds of metal water tanks . . . in all types of water.

Here's what BANOX *does...*

- ★ Controls rust and corrosion scale in pumper and booster tanks and other water storage and hauling tanks used for fire protection.
- ★ Prevents clogging of fog nozzles due to rust and corrosion scale.
- ★ Reduces costly repairs and replacement of tanks . . . helps keep equipment clean and ready for instant use.
- ★ Effective in iron, steel, galvanized or painted tanks . . . with any type of water—hard or soft, stagnant, brackish or sea water.
- ★ Non-combustible . . . Non-toxic!
- ★ Harmless to the skin and clothing, to copper, brass, rubber, wood, paint and fabrics.
- ★ Banox is compatible with "wetter" water.

BANOX is economical and easy to use. One pound per 100 gallons of water — *one dosage protects the tank until the water is used.* Banox, Composition W.T., is especially prepared and packaged for use in water tanks of fire-fighting equipment.

*T. M. Reg. U. S. Pat. Off.

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Read what this pleased customer says:

"We have received all our uniforms and badges and believe me we are all pleased — fine fit and fine uniforms." (John A. Johnson, Treas., Golden Valley Fire Dept., Minneapolis, Minn.)

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or
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192 Lexington, New York 16, N. Y.
Corner 32nd Street: Phone MU 6-0828

5½ x 8½ in., 176 pages

$1.50 single copy

$1.00 per copy in quantities of ten or more to the same address in one shipment.

National Fire Protection Association
60 Batterymarch Street
Boston 10, Massachusetts

Wartime Fire Control in Industry

MUCH of what has been written about the protection of industrial plants in wartime has been interpreted by industrial executives as theoretical, and often correctly so The Division of Business Practices of the National Industrial Conference Board recently consulted with industrial executives in Britain, Germany, France, and the Low Countries. The results of this study have been assembled in an 80-page book, 8½ by 11 inches, paper cover, entitled "Damage Control in Wartime." Requests for this publication should be sent with $3.00 for each copy to the National Industrial Conference Board, Inc., 247 Park Avenue, New York 17, N. Y.

The document is primarily a report on actual measures which were undertaken by British, German and other European industrial plants. It contains an excellent section on fire control measures to be taken in preparing for an attack. Most helpful is the explanation of the function of the storage of large amounts of water actually on the industrial premises for fire fighting. In a section dealing with the meeting of an attack, the respective functions of fire watchers or first aid fire fighters and the functions of the plant fire brigade are covered. This explanation would be very helpful to the many persons who are still confused as to how the fire fighting arrangements of an industrial plant should be set up for civil defense purposes.

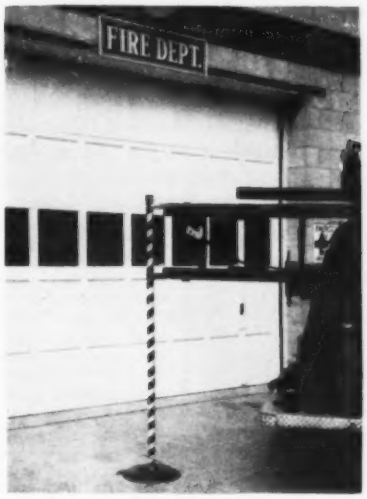
"Fire inspection, lady. Any other combustibles in the house?"

New Fire Instructor for Iowa Training Program

KEITH ROYER, Chief Instructor for the University of Kansas, at Lawrence, Kansas, has been appointed Chief Instructor of Firemen Training at Iowa State College, replacing Robert C. Byrus, recently appointed Director of Fire Service Extension of Maryland.

Industrial Civil Defense

OFFICIAL U. S. Government suggestions are contained in a 64-page pamphlet entitled "Civil Defense in Industry and Institutions," which is available from the U. S. Superintendent of Documents, Washington 25, D.C., for 25 cents. The concept of self-protection as used in this publication is that of organizing and training small groups to perform specialized services, such as policing and fire fighting. It suggests a civil defense organization plan and that exit drills and fire fighting drills be undertaken to familiarize executives and employees with emergency situations. The NFPA publication "Employee Organization for Fire Safety," a 44-page pamphlet available from the NFPA Executive Office for 50 cents, contains additional helpful data for carrying out the recommended plans.



Safety Tip

The Harper Woods Fire Department, located in a suburb of Detroit, Michigan, uses a metal traffic sign painted black with yellow striping to warn people against walking into the rear of protruding ladders. The upright pipe fits between the end heels of a ladder mounted on a pumper and remains standing when the apparatus moves away.

Safe Trucks Save Dollars

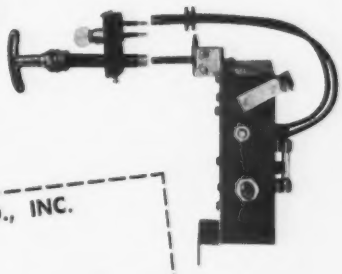
CUT IT OUT

Don't Burn It Out!

Mak-Saf

Reduces fire hazards • Prevents short circuit fires • Warns of short circuits or electrical leakage • Reduces battery failures and saves you money • Disconnects generator when voltage regulator fails • Requires no servicing • Install it and use it • Guaranteed against mechanical defects.

Simple Installation
Positive Operation!



Control handle on dashboard is within easy reach of driver in any emergency. Switch mounts on fire wall of truck. Complete installation instructions with each switch.

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108 Rockwood Street
Rochester 10, New York

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City

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Makers of over 30 million pressure, liquid level and temperature gauges.

CARPENTER LIGHTS

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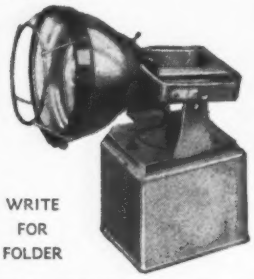
SEARCHMASTER

The Chief picks up his Portable SEARCHMASTER. He's inside the building in time to handle most fires before they get to the dangerous stage, and before floodlights can be set up. All the light you want at the snap of your thumb. Patented handle points anywhere *without cocking arm.* Rechargeable.



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168 Master-Light Bldg.
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THE AIR CONDITIONING

FIRE HOSE DRYER

Patented

Circul-Air is the patented, electrically operated hose dryer which circulates prewarmed fresh air through coiled wet hose at the rate of 5 to 6 air changes per minute. It's designed to lengthen hose life, improve the appearance and functional design of new fire houses, and to save floor space and hard work. No other drying method is so fast — so economical — so easy to use.

WRITE FOR CATALOG TODAY

THE CIRCUL-AIR CORPORATION

575 East Milwaukee Detroit 2, Mich.

Four Die in Home for the Aged

CLEAR thinking in moments of emergency might have saved lives during a fire that occurred in Mrs. Jolliffes Home for Elderly Persons on September 18. Fire fighters from the Sandy Spring and Burtonsville Volunteer Fire Departments made an excellent stop but panic was responsible for the death of four of the aged occupants of the home before the fire departments arrived.

Fire was discovered by a nurse in the vicinity of a closet on the first floor of the north wing main building. The nurse ran from the room, leaving the door open, and notified the woman in charge of the home. An alarm was immediately transmitted to fire alarm headquarters in Silver Spring and evacuation of the patients to the outside was begun.

AT the Silver Spring fire board alarms were given to the Sandy Spring and Burtonsville Volunteer Fire Departments. The Sandy Spring Department responded with two pumpers and two booster trucks, and the Burtonsville Department responded with one pumper and a booster truck. In addition an ambulance from the Tacoma Park Fire Department and an aerial ladder and squad truck from the Silver Spring Fire Department were also due on the first alarm. All of these companies arrived at the home within fifteen minutes after receipt of the alarm. A second alarm was transmitted by the Sandy Spring Department as the company approached the home. This brought an aerial ladder from the Tacoma Park Fire Department, two pumpers from Silver Spring, a 1,000-gallon booster truck from the Naval Ordnance Laboratory, and a pumper from Hillandale. Another alarm brought a pumper from Chevy Chase.

Here is the closet where the fire started. Combustible trim, fibre board ceiling and papered walls helped the rapid spread. During the excitement of the evacuation, one woman died in her bed, another perished when she went back into her room after being led into the parlor, a third ran away from a nurse and was later found dead in her room, while a fourth was rescued by a member of the Tacoma Park Fire Department but died later in a hospital.

The nearest hydrant was over two miles distant. Fire fighters immediately went to work with booster lines. Members of Sandy Spring and Burtonsville Departments used six booster lines with fog and straight shut-off nozzles and confined the fire to the annex and north end of the north wing. The fire was practically extinguished before the second alarm companies arrived. Despite the length of time that the fire had been burning and the flammable construction of the interior of the building, the entire extinguishing of the fire took less than 3,000 gallons of water.

The home consisted of a main building with four interconnecting wings and an annex with four 4-bed wards. The main building and annex were of frame construction with composition and metal roofs and asbestos shingle siding. There were three interior stairways in the building and four exterior stairs. Doors to the exterior fire stairs were locked "so that patients could not be accidentally injured." Keys to these doors were kept in glass boxes adjacent to each door. (*NFPA Building Exits Code states: "Locks, if provided, shall not require key to operate from the inside." — Ed.*)

The main building annex and the quarters of the owner in the rear of the main building were equipped with a non-coded local fire alarm system with eight stations and four alarm bells. Fire drills were held regularly to acquaint the twenty-four employees with their duties in the event of fire, and lists of these duties were posted throughout the home.

PERSONNEL of the home had received instruction on the use of fire extinguishers. However, when this fire occurred, none of the employees tried to use any of the extinguishers. One of the employees stated after the fire that he went into a lavatory, filled a metal can of water, threw this water on the fire, and then was driven out by smoke and flame. Another employee filled a bucket of water but left the filled bucket in the doorway when smoke and flame became too intense.

Four women — two 82-year-olds, one 83-year-old, and one 77-year-old — perished as a result of the fire.

Total loss of the building was initially estimated at $22,500.

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WHATEVER YOUR PREFERENCE
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REGULATION
OR
DROP BRIM

ALUMINUM

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STYLES
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PLASTIC

PRICES
TO
SUIT
ALL
BUDGETS

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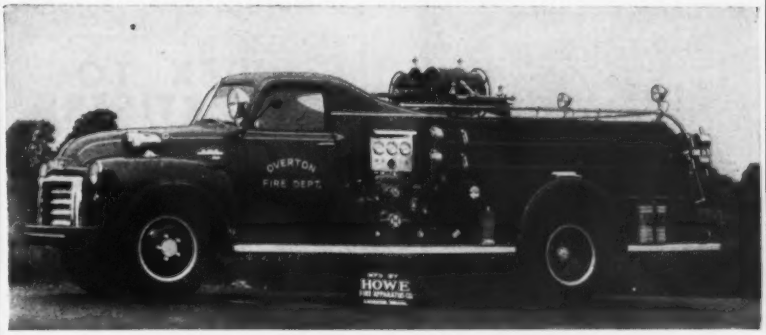
CAIRNS & BRO., INC.
(ALLWOOD), CLIFTON, N. J.
Outfitters to Firemen Since 1836

Now is the time to order your new FIRE RECORD BOOK. We have sizes for large or small departments; also SECRETARY'S BOOKS and other forms.

HELMETS



HOWE Fire Truck Equipment Meeting Every Service Since 1872
Centrifugal, Rotary, and Piston Pumps supplied
HOWE FIRE APPARATUS COMPANY, 1406 West 22nd Street, Anderson, Indiana

"TRUMPET" HYDRANT PUMPS
INEXPENSIVE • DEPENDABLE • EASY TO USE

Clamp type base locks securely to any pentagon or square hydrant nut. Pump operates smoothly and efficiently — saves both time and effort. Built to last a lifetime. Shaft is stainless steel, oscillating wings and valves are brass. Shell and pump lever are cast iron. Has many other uses such as emptying gas tanks, storage tanks or transferring liquids.

MANUFACTURERS OF A COMPLETE LINE OF DISTINCTIVE FIRE FIGHTING EQUIPMENT

See Your Wooster Brass Representative or Write Direct.

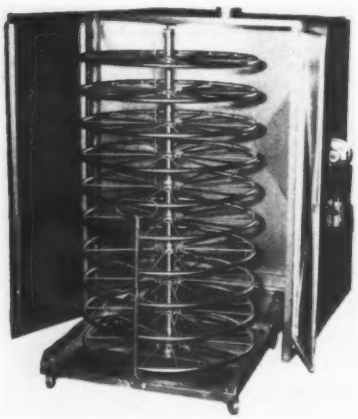
HOSE BRASS GOODS WB LINE THE WOOSTER BRASS CO. WOOSTER, OHIO

THE WOOSTER BRASS CO.
WOOSTER OHIO

What's New in Fire Equipment?

New Machine Speeds Drying of Boots

The Chicago Hardware Foundry Company, 3501 Commonwealth Avenue, North Chicago, Illinois, has developed a new Sani-Dri boot and shoe drier. Drying is accomplished with a 125 cubic foot per minute air stream heated by a 13.5 amp element with a 5300 BTU output.



Hose Driers of the Neep Equipment Company

Two types of hose driers are featured by the Neep Equipment Company, 326 N.W. Broadway, Portland, Oregon. Manufacturer claims that a 500-ft. load of 2½-in. hose can be dried within four or five hours in these cabinets. Model 100 and Model 300 feature two 3100 watt fin type heating units and a forced air fan which raises the temperature in the cabinet proper to 95 degrees. Model 300 has ten circular, revolvable, and removable shelves allowing a load of hose to be moved easily within a station or left on the removable unit. Both models feature full length door hinges and removable shelves. Additional information may be obtained from the manufacturer.

Telescopic Tilting Foam Tower

A new portable device for discharging foam into burning oil tanks has been announced by Pyrene Manufacturing Company, Newark, New Jersey. Described in a circular entitled "Easy to Reach" the equipment claims an advantage of mobility over rough terrain, ease and speed of erection by three or four men, and efficient delivery of large volumes of foam into tanks up to 50 feet in height. The tower is made principally of aluminum in two sections and weighs 475 pounds. A built-in or forcing-type foam maker with water capacity of 300 gpm makes 2,000 to 3,000 gallons of air foam. Further information may be obtained from the manufacturer.

G.E. Duplex Selective Dispatching

A new General Electric development to increase privacy and reduce interference in two-way radio communication systems is called "Duplex Selective Dispatching." With this equipment radio operators may select either of two headquarters for mobile-to-headquarters communication. Dispatchers using separate headquarters receivers would hear only messages from their respective vehicles. Two mobile combinations are available. One transmits a single tone which opens one of two headquarter receivers in a pre-determined plan. The other employs a toggle switch permitting the mobile operator to select one of two tones, each of which opens one of two headquarters receivers.

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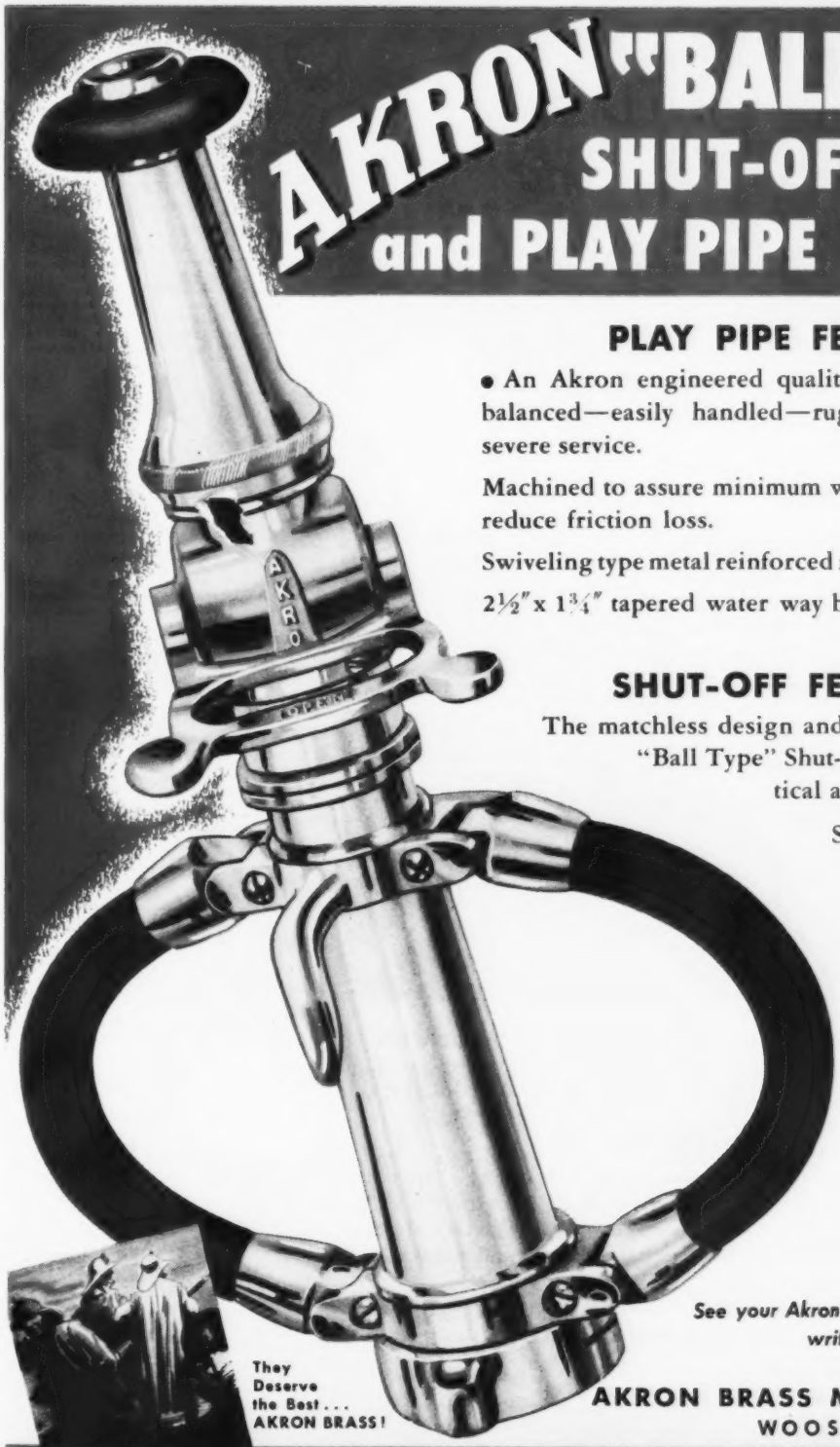
New Motorola "Handie-Talkie" Set

A new version of the Motorola "Handie-Talkie" FM radiophone that incorporates an adjustable squelch control is announced by Motorola, Inc. Mounted on the power supply chassis, the squelch reduces the annoyance of tube and circuit noises normally encountered and eliminates any possible audio distortion resulting from he portables being used in fringe areas.

Handy Re-striping Kit

A stripe kit for retouching the gold striping on fire apparatus is produced by Charles R. Roever, 291 Washington Street, Hempstead, New York. Gold leaf, size, black border, varnish and brushes are included with directions so that fire department members may easily repair the damaged or worn gold striping. Further information may be obtained from the manufacturer at the above address.

AKRON "BALL TYPE" SHUT-OFF NOZZLE and PLAY PIPE ASSEMBLY



PLAY PIPE FEATURES

• An Akron engineered quality product—completely balanced—easily handled—ruggedly constructed for severe service.

Machined to assure minimum water restriction, and to reduce friction loss.

Swiveling type metal reinforced rubber covered handles.

2½" x 1¾" tapered water way bore.

SHUT-OFF FEATURES

The matchless design and construction of Akron "Ball Type" Shut-off Nozzle assures practical and efficient service.

Smooth solid stream of maximum range.

Free operation with minimum effort at any pressure up to 500 lbs.

Brass threaded sleeve permits adjusting if necessary.

Engineered to prevent jamming as frequently occurs with solid plug type.

See your Akron Brass Distributor, or write to us for complete information.

AKRON BRASS MFG. COMPANY, INC.
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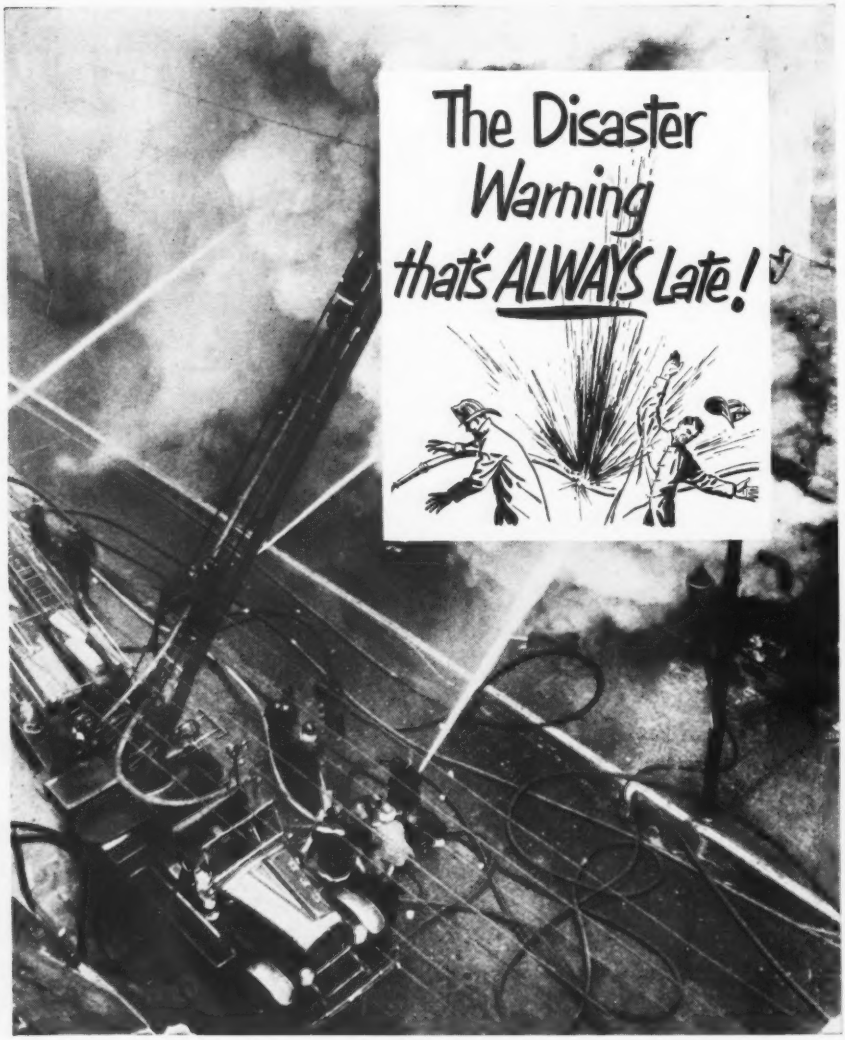
AKRON BRASS
FIRE FIGHTING EQUIPMENT



Failures in fire-fighting equipment are rarely preceded by forewarning. When the equipment fails on the job, it's usually too late to do anything but begin adding up the losses. And — far too often — these losses assume the proportions of tragedy.

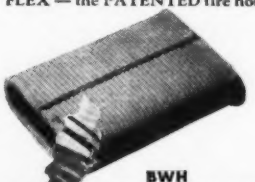
Fire hose is of topmost importance in this connection.

BWH Fire Hose, fully tested and approved . . . and backed by a reputation that speaks for itself . . . is made in a variety of styles to fill your specific needs. Light in weight, easy to handle on ground or ladder. Flat *cured* to fold fast and ride snug in truck bed. Built to give maximum long life performance under severe conditions.

Look for the "General" trademark in the classified section of your phone book. Call on our Fire Equipment experts for more details on BWH leadership of 73 years in the fire hose industry.

GENERAL
"INNER FLEX" HOSE
Double Jacket Construction

General INNER FLEX is the only fire hose with the genuine, smooth-folding inner jacket, especially designed to provide complete pliability. The specially woven folded edges prevent squeezing and pinching and its smooth rubber lining affords longer lasting life. INNER FLEX — the PATENTED fire hose.



BWH
"BOSTON FIRE JACKET" HOSE
Double Jacket

Heavier, stronger fibers, perfect adhesion, smooth, friction-resistant water-way. Rates tops in every test!

BWH
"PARAMOUNT" HOSE
Double Jacket

Designed for easy handling and long service on tough jobs. Ages well, withstands high pressures.

BWH
"MILO" HOSE
Single Jacket

For long, trouble-free performance in communities where a light service hose is adequate.

BWH
"UNDERWRITERS" HOSE
Single or Double Jacket

Made in strict accordance with the National Board of Fire Underwriters' specifications. Labeled or unlabeled.

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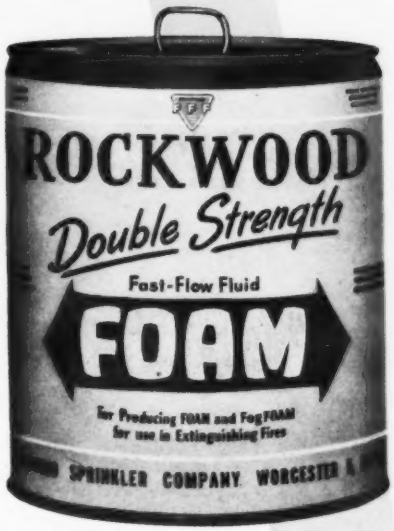
ROCKWOOD'S

New Modern Chemicals and Fire Fighting Tools Whip Gasoline Fires Faster and More Economically

The new Rockwood *Double Strength* Fast-Flow Fluid FOAM used with Rockwood's advanced types of FogFOAM and FOAM Nozzles will cover burning surfaces faster with a blanket of FOAM that completely seals off combustible vapors. This new Rockwood *Double Strength* FOAM is now available for use with hose line nozzles and permanently piped FogFOAM and FOAM systems.

We recommend these new modern chemicals and fire fighting tools to every municipal fire department, industrial plants and refineries for handling the increasing hazard of fires in flammable liquids and materials.

For the most advanced line of fire fighting products offered to firemen in half a century, write Rockwood Sprinkler Company or your nearest distributor.



ROCKWOOD *Double Strength* FOAM

Rockwood's outstanding new FOAM Liquid produces FOAM and FogFOAM for use in extinguishing fires in oil, gasoline and other highly inflammable liquids and materials. It is more fluid, faster spreading and easier to handle. Rockwood Regular FOAM—the type previously supplied—is still available for use with Rockwood devices.

NEW FFF FogFOAM NOZZLE with SCREEN

New LIGHTweight Type FFF Rockwood FogFOAM Nozzle. Available in three sizes for service on 1½" and 2½" or 3½" hose. Discharges (1) FogFOAM (with FogFOAM screen) (2) solid FOAM stream (with FOAM shaper) (3) high velocity WaterFOG pattern.

with

FogFOAM SHAPER

Rockwood LIGHTweight type FFF FogFOAM Nozzle with FOAM shaper attached.

LOOK OVER THESE OUTSTANDING ADVANTAGES... Compare these with other types of FOAM!

More fluid • Faster spreading • Flows freely at sub-zero temperatures (—15°F.) • Greater resistance to heat • Faster extinguishment of gasoline fires • Double Strength — *a gallon goes twice as far* • Stands up under tropical climates • Easier to handle • Cuts shipping cost in half • Requires only half the space for shipping and storage • Flows freely around obstructions • Clings to smooth, vertical or curved surfaces • More efficient on fire trucks • Easy to mix with water.

FOAM EDUCTOR

Rockwood FOAM eductor introduces FOAM Liquid into hose line for use with Rockwood type FFF FogFOAM Nozzles. Eductor can be attached between discharge of fire truck and hose line, connected between hydrant and hose line or between two lengths of hose. Separate models are available for FOAM and Water Wetter.

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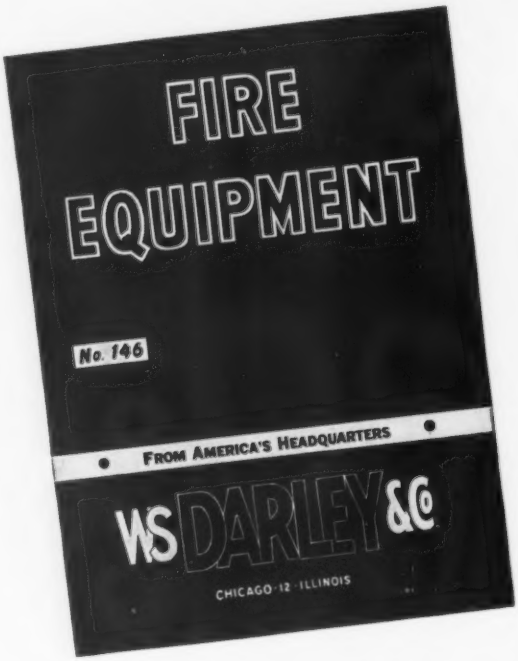

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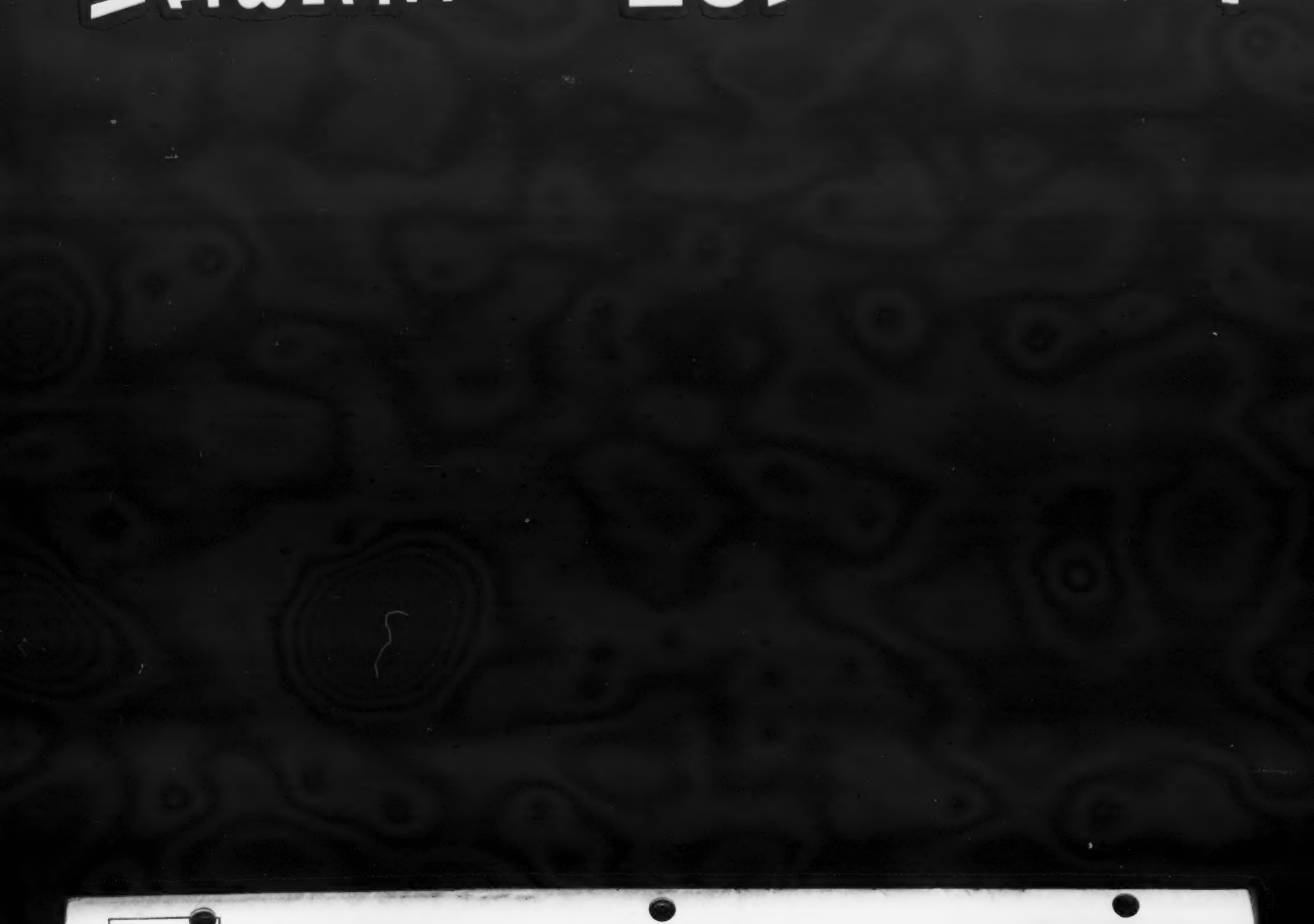
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